

# ARTICLE

## RACIAL PROFILING IN TEXAS DEPARTMENT OF PUBLIC SAFETY TRAFFIC STOPS: RACE AWARE OR RACE BENIGN?

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## I. INTRODUCTION

*[N]or shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.*

U.S. CONST. amend. XIV, § 1 (1865).

Racial profiling by Texas law enforcement agencies is illegal.<sup>1</sup> Texas, nevertheless, continues to be haunted by its apparition.<sup>2</sup> Although it is

1. 37 TEX. ADMIN. CODE § 1.114(14) (Supp. 2002) (Tex. Dep't of Pub. Safety, Major Infraction Applicable to Any Member).

2. See, e.g., DWIGHT STEWARD & MOLLY TOTMAN, RACIAL PROFILING: DON'T MIND IF I TAKE A LOOK, DO YA? AN EXAMINATION OF CONSENT SEARCHES AND CONTRABAND HIT RATES AT TEXAS TRAFFIC STOPS (2005); Cherie Bell, *Report: Blacks Pulled Over at Higher Rate; Group Only One in City Whose Stops Exceed Driver Representation*, DALLAS

forbidden *de jure*, does it persist *de facto*? By examining four years' worth of data, consisting of over five million citations and warnings by the Texas Department of Public Safety, this article examines statistically significant differences in DPS stop and search rates, according to race; demonstrates how this disparity can be introduced into forensic evidence; and then proposes policy solutions to the problem of racial profiling. Three statistical methods of testing for racial profiling are employed – cross tabulation comparisons, one-tailed difference of proportions testing for statistical significance, and logit regressions to test for the odds of being searched or holding contraband, if one is of a particular race or ethnicity. Additionally, this article explores the framework of racial profiling, including relevant literature, legislation, and litigation, as well as prominent causal theories underlying the phenomenon. Issues addressed are: (1) What is “racial profiling?” (2) Do the data tend to reflect racial profiling by the Texas Department of Public Safety? (3) How may such data be introduced into and used as evidence in court? (4) Finally, what can be done to ameliorate or eliminate racial profiling?

Political philosopher Isaiah Berlin wrote of two types of liberty – positive and negative.<sup>3</sup> Positive liberty consists of the bundle of rights granted by the state to its citizens, e.g., civil rights.<sup>4</sup> Negative liberty is the right to be free from state interference within lawful pursuits, e.g., civil liberties.<sup>5</sup> This article concerns itself with the latter – the right to travel on the highway, unmolested by state action based upon race or ethnicity.

In context of promises made by the United States Constitution, this article also concerns itself with legal equality among the citizenry.<sup>6</sup> Going beyond the issue of defining “the people” under the rubric of the preamble to the Constitution,<sup>7</sup> the focus here is on racial equality under law, as enforced by the state, and guaranteed by the Equal Protection Clause of the Fourteenth Amendment.<sup>8</sup> Does the promise of Equal Protection mean what it says, or is it mere platitude? Since passage of the Four-

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MORNING NEWS, Mar. 13, 2003, at T1; Michael Grabel, *Racial Disparities in Searches Persist; Dallas Traffic Stop Data Similar to Year Before; Doubts Dog Numbers*, DALLAS MORNING NEWS, Mar. 2, 2004, at B1; Jason Trahan, *Hispanics Searched More Often; Views Differ on Whether Traffic Stop Data Signal Racial Profiling*, DALLAS MORNING NEWS, May 4, 2002, at Y1.

3. Isaiah Berlin, *Two Concepts of Liberty*, in *FOUR ESSAYS ON LIBERTY* 122-34 (1969).

4. *Id.* at 131-34.

5. *Id.* at 122-31.

6. U.S. CONST. amend. XIV, § 1.

7. U.S. CONST. pmbl.

8. U.S. CONST. amend. XIV, § 1.

teenth Amendment almost a century-and-a-half ago, certain groups of people have been under-included, or even excluded, from its promise.

In the annals of the republic known as the United States of America, two diametrically opposing viewpoints of race have evolved, both reflective of differing attitudes of the same social fabric.<sup>9</sup> They each concern the human race; not the human race as a species, but what Professor Glenn C. Loury calls “markers” of race – racial distinctions among the human species.<sup>10</sup> From these so-called markers arise the dichotomy of race awareness versus race benignity.<sup>11</sup> Do we, and should we, as a civilization, consider racial differences in making certain legal decisions; or should we disregard them entirely as irrelevant under law? Can these diametrically opposed policies co-exist? Will one eventually prevail? Will they ever be reconciled? These questions are largely academic, and need not be addressed here. The more pressing question is: Will the society known as the United States of America, and the constituent states that comprise it, be able to fulfill the promise that all persons are created equal? Will the republic evolve to the point where equal protection of law for everyone is reality, or will it forever be relegated to the dustbin of empty political polemic? For if the republic cannot guarantee its own citizenry equal protection under its own laws, can it survive? Should it?

Antedating the inception of the republic, the original thirteen colonies suffered pangs of racial discord. The Constitutional Convention that convened in Philadelphia, the city of “brotherly love,” in the spring of 1787, was compelled to accept the three-fifths compromise on the divisive issue of slavery, which had pitted southern agrarian interests against the financial and mercantile interests of the north.<sup>12</sup> As originally enacted, Article I, Section 2 of the newly-proposed Constitution provided that members of the House of Representatives and direct taxes would be apportioned among the states by number of inhabitants, determined by adding all free persons including indentured servants, “excluding Indians not taxed,” and “three fifths of all other Persons.”<sup>13</sup> “All other persons,” as any school child learns, referred to the slaves conscripted from the continent of Africa.<sup>14</sup> Ironically, it was the Southern states that lobbied to include the slaves in the census, since slaves outnumbered free Whites in many Southern states.<sup>15</sup> Thus, including slaves in the official population would

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9. GLENN C. LOURY, *THE ANATOMY OF RACIAL INEQUALITY* 111-13 (2002).

10. *Id.* at 27-29.

11. *Id.* at 47-52.

12. BENJAMIN GINSBURG ET AL., *WE THE PEOPLE: AN INTRODUCTION TO AMERICAN POLITICS* 47-49 (4th ed. 2003).

13. U.S. CONST. art. I, § 2, cl. 3.

14. *See* GINSBURG ET AL., *supra* note 12, at 48.

15. *Id.* at 47-48.

have bolstered the power of the south in the newly-created Congress.<sup>16</sup> Since the North feared that inclusion of slaves would dilute its congressional strength vis-à-vis the South, it opposed their inclusion.<sup>17</sup> As far back as the inception of the republic, persons of African heritage, even though recognized as human beings, still were not free and equal beings in the eyes of the law.

Following the Emancipation Proclamation in 1863 and the Civil War from 1861 to 1865, venue of this battle for legal equality has shifted from battlefields to courthouses, statehouses, and executive mansions – repositories of legal jurisdiction.<sup>18</sup> The major premise of this article is that absent discrimination, and all else being equal, one should not be selected for vetting by law enforcement based upon their race or ethnicity. Cynics argue that racial profiling should not be illegal, if race or ethnicity could be considered to be a valid indicator of criminal proclivity.<sup>19</sup> Prison populations are inhabited by a disproportionately larger percentage of African-Americans and Hispanics than Anglos, compared to their overall representation in the population-at-large, and many argue that this offers *prima facie* evidence that minority groups commit a greater proportion of crime, thereby imparting relevance of race to criminality.<sup>20</sup> The fallacy present in such an argument is the blatant disregard for all variables other than race. Minority groups may be incarcerated in greater proportions than Whites because they are more likely to be vetted as a result of their race.<sup>21</sup> Or, perhaps due to a greater police presence in predominantly Black and Hispanic neighborhoods, those groups are more prone to official scrutiny.<sup>22</sup> Alternately, other non-racial variables, like poverty or

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16. *Id.* at 48-49.

17. *Id.* at 48.

18. *See generally id.* at 160-205.

19. For an example of this argument, see HEATHER MACDONALD, ARE COPS RACIST? 28-34 (2003).

20. A recent study by the U.S. Sentencing Commission found that over the past fifteen years the percentage of the Whites in prison dropped from nearly sixty percent in 1984 to around thirty-five percent in 2002, while the percentage of minorities in prison has correspondingly increased. *See* U.S. SENTENCING COMM'N, FIFTEEN YEARS OF GUIDELINES SENTENCING: AN ASSESSMENT OF HOW WELL THE FEDERAL CRIMINAL JUSTICE SYSTEM IS ACHIEVING THE GOALS OF SENTENCING REFORM 115 (2004), available at [http://www.ussc.gov/15\\_year/15year.htm](http://www.ussc.gov/15_year/15year.htm).

21. One recent study of racial profiling statistics in Texas found that Blacks and Hispanics are still more likely to be the subject of consent searches. *See* MOLLY TOTMAN & DWIGHT STEWARD, SEARCHING FOR CONSENT: AN ANALYSIS OF RACIAL PROFILING DATA IN TEXAS 2-3 (2006), available at [http://www.criminaljusticecoalition.org/files/userfiles/RP\\_report\\_FINAL\\_with\\_Covers.pdf](http://www.criminaljusticecoalition.org/files/userfiles/RP_report_FINAL_with_Covers.pdf).

22. One possible solution to the problem of distrust of law enforcement in minority communities that is often pushed by law enforcement officials is community policing, which calls for greater citizen participation in policing. *See* Douglas Davidson, Deputy

cultural differences, may be entering into the equation.<sup>23</sup> Whatever the reasons, the argument ignores a myriad of variables underlying the problem.

Does racial proclivity toward crime exist?<sup>24</sup> Does criminal activity cut across racial lines? Are white collar criminals more often white? Is street crime the predominant domain of African-Americans and Hispanics? Are those criminals who can afford better lawyers, more likely to escape conviction than those who cannot, regardless of race?<sup>25</sup> Do some (or many) of the guilty, regardless of race, escape detection, conviction, and punishment? Do some (or many) of the innocent, regardless of race, suffer wrongful conviction and punishment? Even then, the cynic could argue that no system of justice is perfect (and no humanly devised institution is), and that some (or many) of the guilty will avoid punishment, while some (or many) of the innocent will inevitably suffer, due to inherent flaws in the system.<sup>26</sup> The cynic will say that, in the long run, the

Chief, U.S. Mission to the Organization for Security and Cooperation in Europe, Statement to the OSCE Supplementary Human Dimension and Implementation Meeting (Oct. 28, 2002) (transcript available at <http://www.state.gov/p/eur/rls/rm/2002/14784.htm>).

23. One newspaper article found that cultural differences between police officers and members of Toronto's Chinese community significantly undermined that community's relationship with law enforcement. See Taneisha Davidson, *Chinatown Cultural Barriers Undermine Relations with Police: To Few Police Speak Chinese, Community Leader Says*, TORONTO OBSERVER, Mar. 1, 2002, available at [http://observer.thecentre.centennialcollege.ca/features/chinatown\\_cops030102.htm](http://observer.thecentre.centennialcollege.ca/features/chinatown_cops030102.htm).

24. Some groups argue the answer to this question is yes. See generally AMERICAN RENAISSANCE, *THE COLOR OF CRIME: RACE, CRIME, AND JUSTICE IN AMERICA* (2d ed. 2005), available at <http://www.amren.com/store/colorcrime.htm>.

25. Indeed, before the passage of the Texas Fair Defense Act in 2001, Texas Appleseed, a non-profit public policy group, conducted a study that found the indigent defense system in Texas to be in a deplorable state. Local counties were required to set up and fund their own indigent defense systems with little or no help from the Texas Legislature, and with few accountability standards or procedures in place. See generally TEX. APPLESEED FAIR DEF. PROJECT, *THE FAIR DEFENSE REPORT: ANALYSIS OF INDIGENT DEFENSE PRACTICES IN TEXAS* (2000), available at <http://www.equaljusticecenter.org/Fair%20Defense%20Reference%20Report.pdf>.

26. While the debate over whether our criminal justice system has a propensity to convict the innocent and set the guilty free takes place in nearly all segments of the criminal justice system, it is particularly heated in several fields. Among these are the fields of DNA testing, capital punishment, and indigent defense. For an overview of the debate in these fields please consult the following sources: AM. BAR ASS'N STANDING COMM. ON LEGAL AID & INDIGENT DEFENDENTS, *GIDEON'S BROKEN PROMISE: AMERICA'S CONTINUING QUEST FOR EQUAL JUSTICE* (2004), available at <http://www.abanet.org/legalservices/sclaid/defender/brokenpromise/fullreport.pdf>; RICHARD C. DEITER, *DEATH PENALTY INFO. CTR., INNOCENCE AND THE CRISIS IN THE AMERICAN DEATH PENALTY* (2004), available at <http://www.deathpenaltyinfo.org/article.php?scid=45&did=1149>; Maurice Posley et al., *Scandal Touches Even Elite Labs: Flawed Work, Resistance to Scrutiny Seen Across U.S.*, CHI. TRIB., Oct. 21, 2004, at C1.

system is fair because it provides the greatest good for the greatest number of people.<sup>27</sup>

But, if that is true, then what type of society promotes such ideals? An efficient one, perhaps, but certainly not a just one. Any society that tolerates, much less condones, donning blinders to guilt while staring accusatorily at the innocent, based upon the distinction between weak and strong, cannot be considered to be just in an enlightened system of law. It is not, and should not be, the United States of America of the twenty-first century. No longer is this the era of *Dred Scott*.<sup>28</sup> The law has evolved from less enlightened antebellum days.

As a response to the tendency to analyze crime in the context of race, Glen C. Loury, in his trenchant opus, *The Anatomy of Racial Inequality*, argues:

Recall Axiom 2, which constrains this theoretical project by a baseline presumption that I have called "anti-essentialism." Explaining protracted and durable racial inequality becomes relatively easy if one admits the possibility of inherent racial differences in human attributes that significantly influence the ability of individuals to act effectively (intelligence, for example). I reject this possibility . . . . [I]n a raced polity committed to democratic values, a public discourse that imputes inherent incapacity to some raced group of citizens is fundamentally inconsistent with the espoused democratic ideals.<sup>29</sup>

Notwithstanding anything else, imputation of inferiority to any race due to congenital characteristics is simply inconsistent with firmly-stated constitutional precepts.<sup>30</sup> It is not only legally unsustainable, and politically unpalatable, but also morally reprehensible. If one accepts the ultimacy of the promise contained in the founding charter of the republic as

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27. Indeed, some argue that the number of people who have been exonerated following a death sentence is so miniscule that changes in the various death penalty systems across the country are really not necessary, and that adequate safeguards for protecting the innocent are already in place. See DUDLEY SHARP, JUSTICE FOR ALL, DEATH PENALTY AND SENTENCING INFORMATION IN THE UNITED STATES (1997), <http://www.prodeathpenalty.com/DP.html#A.Innocence>.

28. *Scott v. Sandford*, 60 U.S. 393 (1857) (holding that Blacks could not become citizens).

29. See LOURY, *supra* note 9, at 91.

30. Even as it upheld the University of Michigan Law School's policy which took race into account during admissions, the United States Supreme Court was careful to state that laws and policies motivated by a belief in racial inferiority were by definition "illegitimate." See *Grutter v. Bollinger*, 539 U.S. 306, 326 (2003).

well as the Fourteenth Amendment to the Constitution, then it is easy to recognize the allegation of racial inferiority as the point of origination.<sup>31</sup>

Given that racial "essentialism" is antithetical to American constitutional ideals, it stands to reason that minority races should not bear a greater burden of being searched by law enforcement officers than their white counterparts.<sup>32</sup> One would expect to find that, absent discrimination, racial minorities are searched at rates less than or equal to Whites. However, this is not the case.<sup>33</sup>

The question is not so much whether such disparities exist; the data indicate that they do.<sup>34</sup> More perspicacious questions are: Why do they exist, and continue to persist? What can be done to eliminate them? After exploring what the data indicate, this article will demonstrate ways to present a *prima facie* case of racial profiling in the courtroom. I will then suggest incremental measures to alleviate these racial disparities, with an eye on the ultimate goal of their elimination, for the consideration of the duly-elected and appointed policymakers.

## II. WHAT IS RACIAL PROFILING?

*But I know it when I see it.*

*Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964)  
(Stewart, J., concurring)

In the first quarter of 2003, *The Dallas Morning News* reported that racial disparities in criminal searches contumaciously persisted.<sup>35</sup> "Search ratios" based upon race did "not vary significantly" from the previous year for the City of Dallas.<sup>36</sup> Blacks were over twice as likely to be searched as Whites, and Hispanics over three times as likely.<sup>37</sup>

Although rarely reported, the debate over racial profiling really revolves around two main issues: (1) exactly what is it? and (2) why does it persist? Addressing the first issue is a dearth of any universal agreement on a definition of "racial profiling." According to one author . . . "racial

31. U.S. CONST. amend XIV, § 1.

32. Racial essentialism is an academic theory which claims that the biological traits which form the basis of racial membership, also tend to determine certain internal traits, such as intelligence. See LOURY, *supra* note 9, at 5-6; Naomi Zack, *Philosophical Aspects of the 'AAA Statement on Race'*, 1 ANTHROPOLOGICAL THEORY 445, 445 (2001).

33. See TOTMAN & STEWARD, *supra* note 21, at 2-3.

34. *Id.*

35. Michael Grabell, *Racial Disparities in Searches Persist: Dallas Traffic Stop Data Similar to Year Before; Doubts Dog Numbers*, DALLAS MORNING NEWS, Mar. 2, 2004, at B1.

36. *Id.*

37. *Id.*



profiling'. . . has only recently appeared and has no set meaning."<sup>38</sup> Another obstacle is defining a benchmark against which to judge racial disparities.<sup>39</sup> Grogger and Ridgeway<sup>40</sup> opine that creating such a standard is a "key empirical problem."<sup>41</sup>

The federally-funded COPS report has adopted the following definition from the National Organization of Black Law Enforcement Executives (NOBLE): "The act (intentional or unintentional) of applying or incorporating personal, societal or organizational biases and/or stereotypes in decision-making, police actions or the administration of justice."<sup>42</sup>

Schauer<sup>43</sup> maintains that racial profiling is the result of public officials using their own judgment in determining who and who not to vet, based upon criteria they alone deem to be just cause for suspicion.<sup>44</sup> This notion of racial profiling harmonizes with Justice Thurgood Marshall's dissenting admonition in *United States v. Sokolow*,<sup>45</sup> warning against the absence of a "mechanistic application of a formula," in favor of an "officer's ability and determination to make sensitive and fact-specific inferences 'in light of his experience.'"<sup>46</sup> Nevertheless, it might be argued that a better definition of racial profiling, as Schauer goes on to elaborate, includes more than race "on a formal list of suspicion - raising factors," and takes into account "racial animus" or the "mistaken belief" that race is a valid indicator of guilt.<sup>47</sup>

Even ardent proponents of using race as a proclivity of suspicion, like Heather Mac Donald,<sup>48</sup> distinguish between "hard" and "soft" profiling, the former using race as the *sole* criterion for criminal prediction, the

38. Samuel R. Gross & Katherine Y. Barnes, *Road Work: Racial Profiling and Drug Interdiction on the Highway*, 101 MICH. L. REV. 651, 654 (2002) (citing Sheri Lynn Johnson, *Race and the Decision to Detain a Suspect*, 93 YALE L.J. 214 (1983); Jerome Skolnick & Abigail Caplovitz, *Guns, Drugs, and Profiling: Ways to Target Guns and Minimize Racial profiling*, 43 ARIZ. L. REV. 413, 419 n.36 (2001)).

39. Jefferey Grogger & Greg Ridgeway, *Testing for Racial Profiling in Traffic Stops From Behind a Veil of Darkness* 1 (Harris Sch., Working Paper No. 05.7, 2005), available at [http://harrisschool.uchicago.edu/About/publications/working-papers/pdf/wp\\_05\\_07.pdf](http://harrisschool.uchicago.edu/About/publications/working-papers/pdf/wp_05_07.pdf).

40. *Id.*

41. *Id.*

42. JOYCE McMAHON ET AL., U.S. DEP'T OF JUSTICE, OFFICE OF CMTY. ORIENTED POLICING SERVS., HOW TO CORRECTLY COLLECT AND ANALYZE RACIAL PROFILING DATA: YOUR REPUTATION DEPENDS ON IT 21 (2002) [hereinafter COPS REPORT].

43. FREDERICK SCHAUER, PROFILES, PROBABILITIES, AND STEREOTYPES (2003).

44. *Id.* at 173.

45. *United States v. Sokolow*, 490 U.S. 1, 11 (1989) (Marshall, J., dissenting).

46. *See id.* at 13.

47. *See* SCHAUER, *supra* note 43, at 180.

48. MACDONALD, *supra* note 19.

latter using it as one of several criteria.<sup>49</sup> Nobel Laureates Gary Becker<sup>50</sup> and Kenneth Arrow<sup>51</sup> attempted to define prejudicial profiling as the conscious decision to relinquish some profits for the sake of maximizing utility of racial prejudice, which is a rational decision if preference is given to forego some monetary profits to satiate one's prejudicial appetite.<sup>52</sup> Firms employing such profit-compromising motives, Becker and Arrow argued, would eventually be forced out of business, due to economic inefficiency.<sup>53</sup> Still, this definition fails to address the question of just what is racial profiling.

Although pundits disagree on a definition of racial profiling, whether intentional, "aversive,"<sup>54</sup> or subconscious, the common denominator appears to incorporate racial or ethnic characteristics in any deliberative choice or decision.<sup>55</sup> And, although racial profiling exhibits myriad forms, the literature focuses on three often overlapping areas – economic, educational, and legal.<sup>56</sup> Much more literature exists on racial discrimination than on the specific topic of "racial profiling," but, for obvious reasons the two are inextricably intertwined. What follows here is a brief overview of both subjects in the fields of education, employment, and economics.

In education, racial discrimination traditionally has appeared as school segregation, integration, and affirmative action.<sup>57</sup> San Miguel and Valencia<sup>58</sup> explored the struggle of Hispanics from segregation through *Hopwood*<sup>59</sup> to attain educational parity in the southwestern United States. In

49. *Id.* at 10.

50. GARY S. BECKER, *THE ECONOMICS OF DISCRIMINATION* (2d ed. 1971).

51. Kenneth Arrow, *The Theory of Discrimination*, in *DISCRIMINATION IN LABOR MARKETS* (Orley Ashenfelter & Albert Rees eds., 1973).

52. See BECKER, *supra* note 50, at 16; see also *id.* at 3.

53. See *id.* at 16.

54. John F. Dovidio & Samuel L. Gaertner, *Affirmative Action, Unintentional Racial Biases, and Intergroup Relations*, 52 J. SOC. ISSUES 51, 54 (1996).

55. See SCHAUER, *supra* note 43, at 173; see also *id.* at 54.

56. These three types of racial profiling will be discussed in greater detail below, but for an overview please consult the following sources, Griggs v. Duke Power Co., 401 U.S. 424 (1971); Ann-Marie G. Harris, *Shopping While Black: Applying 42 U.S.C. § 1981 to Cases of Consumer Racial Profiling*, 23 B.C. THIRD WORLD L.J. 1 (2003); Charles T. Clotfelter, *Public School Segregation in Metropolitan Areas* (Nat'l Bureau of Econ. Research, Working Paper no. 6779, 1998), available at <http://www.nber.org/papers/w6779>.

57. For an informative overview of how these aspects of racial profiling have effected Mexican-Americans in the American Southwest, see Guadalupe San Miguel, Jr. & Richard R. Valencia, *From the Treaty of Guadalupe Hidalgo to Hopwood: the Educational Plight and Struggle of Mexican Americans in the Southwest*, 68 HARV. EDUC. REV. 353, 368-77, 390-95 (1998).

58. See generally *id.*

59. See *Hopwood v. Texas*, 78 F.3d 932 (5th Cir. 1996).

addition, Clotfelter<sup>60</sup> examined racial discrimination as a function of public school enrollment and segregation within, and among, school districts in the metropolitan United States.<sup>61</sup> Finally, when examining patterns of South African racial inclusion and exclusion analogous to patterns in the United States, King<sup>62</sup> wondered whether “comprehensive racial inclusion” in American schools was an “elusive goal.”<sup>63</sup>

In economics, racial profiling assumes innumerable guises.<sup>64</sup> For example, in the fields of insurance, banking, financing, and housing, it has been called “redlining” and “rationing.”<sup>65</sup> It may be found in virtually every aspect of employment – hiring, discipline, compensation, promotion, demotion and termination.<sup>66</sup> Even in the prosaic world of retail sales, racial profiling may manifest itself whenever a clerk, consciously or subconsciously, considers it worth the time and effort to assist a customer because of the clerk’s stereotypical preconceptions of whether that customer can afford a good or service, based upon the customer’s race.<sup>67</sup>

60. Charles T. Clotfelter, *Public School Segregation in Metropolitan Areas* (Nat’l Bureau of Econ. Research, Working Paper No. 6779, 1998), available at <http://www.nber.org/papers/w6779>.

61. *Id.* at 5-6.

62. Kimberly L. King, *Is Comprehensive Racial Inclusion an Illusive Goal for Educational Institutions in the United States?*, 34 EQUITY & EXCELLENCE EDUC. 43 (2001).

63. *Id.* at 43.

64. The guises that racial profiling take in economics is discussed in more detail below. For a thorough overview of the subject please consult the following sources generally, STEPHEN ROSS & JOHN YINGER, *THE COLOR OF CREDIT: MORTGAGE DISCRIMINATION, RESEARCH METHODOLOGY, AND FAIR-LENDING ENFORCEMENT* (2002); TOM BAKER & KAREN McELRATH, *INSURANCE CLAIMS DISCRIMINATION, INSURANCE REDLINING: DISINVESTMENT, REINVESTMENT, AND THE EVOLVING ROLE OF FINANCIAL INSTITUTIONS* 141-56 (1997); ANTHONY M. YEZER, *FAIR LENDING ANALYSIS: A COMPENDIUM OF ESSAYS ON THE USE OF STATISTICS* (1995); Scott E. Harrington & Greg Neihaus, *Race, Redlining, and Automobile Insurance Prices*, 71 J. BUS. 439 (1998); see also Harris, *supra* note 56, at 8; Robert W. Klein & Martin F. Grace, *Urban Homeowners Insurance Markets in Texas: A Search for Redlining*, 68 J. RISK & INS. 581 (2001); Harry L. Margulis, *Predicting the Growth and Filtering of At-risk Housing: Structure Ageing, Poverty and Redlining*, 35 URB. STUD. 1231 (1998); Frank E. Nothaft & Vanessa G. Perry, *Do Mortgage Rates Vary by Neighborhood? Implications for Loan Pricing & Redlining*, 11 J. HOUSING ECON. 244, 262 (2002).

65. See ROSS & YINGER, *supra* note 64, at 39; Michael S. Bar, *Modes of Credit Market Regulation* 4 (John M. Olin Ctr. For Law and Economics, Working Paper No. 45, 2005), available at <http://law.bepress.com/cgi/viewcontent.cgi?article=1045&context=UMichlwps>.

66. Racial Discrimination in the Workplace, <http://www.discriminationattorney.com/race.shtml> (last visited Feb. 23, 2006).

67. Harris, *supra* note 56, at 8.

In the banking, credit, insurance, and housing fields, literature related to race abounds.<sup>68</sup> The process that occurs when a company considers whether to grant or underwrite loans or insurance policies in so-called undesirable neighborhoods, based upon racial demographics, is known as "redlining."<sup>69</sup> In extreme cases, people who fall on the wrong side of the line receive neither goods nor services, or pay an inflated premium due to stereotyped risk imbued in the underwriting process.<sup>70</sup> When they examined disparities in mortgage lending from a nationally representative sample of neighborhoods in data blocked by racial composition, Nothaft and Perry<sup>71</sup> were unable to confirm the existence of redlining.<sup>72</sup> Margulis<sup>73</sup> tried to determine whether redlining in Cleveland existed and performed a regression analysis by studying housing conditions and probability of obtaining a mortgage, as a function of race, poverty, and structure age.<sup>74</sup> Yezer<sup>75</sup> assembled a "compendium" of statistical studies on race as affecting mortgage lending and neighborhood redlining.<sup>76</sup> Burgeoning literature exists on racial discrimination in the insurance industry, an area that, in and of itself, promises to generate fertile ground for debate, legislation and litigation far into the foreseeable future.<sup>77</sup>

Ross and Yinger<sup>78</sup> have written what is arguably the definitive work on racial discrimination in the mortgage lending business. After examining the Boston Fed Study, they take pains to rebut critics of the study before proposing their own methodologies for addressing racial discrimination in mortgage underwriting and credit scoring.<sup>79</sup> According to Ross and Yinger, the overriding difficulty of any study of racial discrimination is the distinction between so-called disparate treatment and disparate im-

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68. For only a few examples, see ROSS & YINGER, *supra* note 64; Margulis, *supra* note 64; Harrington & Neihaus, *supra* note 64 (discussing automobile insurance premiums in Missouri as a function of race).

69. See ROSS & YINGER, *supra* note 64, at 39.

70. *Id.*; see also Harrington & Neihaus, *supra* note 64, at 443 (discussing automobile insurance premiums in Missouri as a function of race).

71. Nothaft & Perry, *supra* note 64.

72. *Id.* at 262.

73. Margulis, *supra* note 64.

74. *Id.* at 1232.

75. Anthony M. Yezer, *Fair Lending Analysis: A Compendium of Essays on the Use of Statistics*, American Bankers Ass'n (1995), noted in DOUGLAS D. EVANOFF & LEWIS M. SEGAL, CRA AND FAIR LENDING REGULATIONS: RESULTING TRENDS IN MORTGAGE LENDING 38 n.10 (1996).

76. *Id.*

77. Harrington & Neihaus, *supra* note 64; see also Klein & Grace, *supra* note 64 (econometric study of statistical significance in setting insurance premiums for Texas urban homeowners).

78. See ROSS & YINGER, *supra* note 64.

79. *Id.* at 3-8, 10-14.

pact analysis.<sup>80</sup> The former is characterized by intentionally treating people differently on the basis of some legally-protected status.<sup>81</sup> The latter involves actions which produce disparate effects on similarly-situated people, based upon some legally-protected status, even if those actions exhibit facial benignity.<sup>82</sup> Because of the ostensible benignity, it is always more difficult to investigate disparate impact than disparate treatment.<sup>83</sup>

Although Ross and Yinger developed methodologies for detecting the existence of both forms of discrimination, their work focused on disparate impact.<sup>84</sup> In the legal context, the distinction between the two forms of discrimination traces back to *Griggs v. Duke Power Co.*<sup>85</sup> *Griggs* opined that certain practices, while superficially benign, may be infused with discriminatory effect.<sup>86</sup> "The Act [Title VII of the 1964 Civil Rights] proscribes not only overt discrimination but also practices that are fair in form, but discriminatory in operation."<sup>87</sup> Ross and Yinger also acknowledged the phenomenon of statistical discrimination, which they described as a form of disparate impact.<sup>88</sup> Credit criteria applied equally is not discriminatory, notwithstanding profitability or lack of it.<sup>89</sup> Different criteria applied to minorities (a "protected class" to use legal argot) is discriminatory whether profitable or not.<sup>90</sup> "The law does not allow a lender to use different criteria for people in a protected class than for other people even if it is more profitable to do so."<sup>91</sup>

In credit discrimination cases, courts likewise distinguish between disparate treatment and disparate impact.<sup>92</sup> Disparate treatment can be proven by demonstrating that a lender either overtly applied legally-prohibited criteria, or was unable to explain adequately its use of discriminatory criteria with legitimate, nondiscriminatory reasons.<sup>93</sup> Under disparate impact analysis, unless facially-benign practices can be corrobo-

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80. *Id.* at 274-76.

81. See *Griggs v. Duke Power Co.*, 401 U.S. 424, 430-31 (1971); see also *id.* at 432.

82. *Id.* at 431; see also ROSS & YINGER, *supra* note 64, at 32.

83. See ROSS & YINGER, *supra* note 64, at 313, 361.

84. *Id.* at 361-68.

85. *Griggs*, 401 U.S. 424.

86. *Id.* at 431.

87. *Id.*

88. See ROSS & YINGER, *supra* note 64, at 41.

89. *Id.*

90. *Id.*

91. *Id.*

92. See *id.* at 32 (quoting OFFICE OF THE COMPTROLLER OF THE CURRENCY ET AL., INTERAGENCY FAIR LENDING EXAMINATION PROCEDURES ii, iv (1999)).

93. ROSS & YINGER, *supra* note 64, at 32 (quoting OFFICE OF THE COMPTROLLER OF THE CURRENCY, ET AL., INTERAGENCY FAIR LENDING EXAMINATION PROCEDURES ii, iv (1999)).

rated by justifiable, nondiscriminatory necessity, the so-called "business necessity" doctrine, such practices may be indicia of prohibited discrimination.<sup>94</sup>

Similarly, the decision of a law enforcement officer to stop or search a suspect is hardly an objective matter.<sup>95</sup> Inherently, it is subjective.<sup>96</sup> True, there are racially benign indicia that may, and probably do, trigger a decision to stop or search, like certain distinctive odors, facial expressions (bloodshot eyes or dilated pupils), and contraband in plain view. However, officers often testify that their decision to stop, and especially, to search, a suspect is precipitated by an intangible viscera.<sup>97</sup> Thus, in many cases, the final determination is subjective, even if not purely so.

In legal fora, it is the distinction between objective and subjective that trumps all other issues in cases of racial discrimination.<sup>98</sup> Traditionally, courts have applied a disparate treatment standard of proof to subjective practices, perhaps because disparate treatment is "the most easily understood type of discrimination."<sup>99</sup> Disparate treatment, simply put, requires proof, to some degree, of the intent which motivates the action in question.<sup>100</sup> Because racial profiling is a subjective, rather than objective phenomenon, proof of intent is problematic in the judicial context.<sup>101</sup>

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94. *Id.* (quoting OFFICE OF THE COMPTROLLER OF THE CURRENCY ET AL., INTER-AGENCY FAIR LENDING EXAMINATION PROCEDURES ii, iv (1999)).

95. Even the United States Supreme Court has stated that the decision to conduct a search should be left to the discretion of a police officer. *See* *United States v. Montoya de Hernandez*, 473 U.S. 531, 537 (1985).

96. Indeed, the United States Supreme Court has stated that all searches and seizures must be based upon reasonableness, and "[w]hat is reasonable depends upon all of the circumstances surrounding the search or seizure and the nature of the search or seizure itself." *See id.* at 537. This implies that the decision of whether or not to conduct a search is entirely a matter of officer discretion based upon the information he has available to him at the time. This seems highly subjective.

97. These particular incendiary are accepted by courts. *See* *United States v. MacKey*, 149 Fed. Appx. 874, 878 (11th Cir. 2005); *United States v. West*, 219 F.3d 1171, 1174 (10th Cir. 2000); *United States v. Rhodes*, 1994 U.S. App. LEXIS 18701 (10th Cir. 1994); *United States v. Cook*, 25 F. Supp. 2d 1167, 1168 (D. Colo. 1998). However, courts have held that the Fourth Amendment prohibits stops and searches based solely on the "whim" of an officer. *See* *United States v. Martinez*, 354 F.3d 932, 937 (8th Cir. 2004).

98. It was this issue that initially led the Supreme Court to craft the disparate impact standard. *See* *Griggs v. Duke Power Co.*, 401 U.S. 424, 431 (1971).

99. *Int'l Brotherhood of Teamsters v. United States*, 431 U.S. 324, 335 n.15 (1997).

100. *See* ROSS & YINGER, *supra* note 64, at 32 (quoting OFFICE OF THE COMPTROLLER OF THE CURRENCY ET AL., INTER-AGENCY FAIR LENDING EXAMINATION PROCEDURES ii, iv (1999)).

101. In the legal world, racial profiling generally surfaces in the form of "selective enforcement claims." These claims always require a criminal defendant to prove not only that the traffic stop had a discriminatory effect, but also that it was prompted by a discriminatory intent. *See* *United States v. Bell*, 86 F.3d 820, 823 (8th Cir. 1996); *Jones v. Sterling*,

Lundman and Kaufman<sup>102</sup> point to deficiencies in the study of racial profiling in criminal law: restriction of most studies to particularized jurisdictions, reliance upon law enforcement officials as the exclusive data collectors, and use of single variable regression analysis.<sup>103</sup> Early studies on racial profiling in criminal law were conducted by the American Civil Liberties Union.<sup>104</sup> *Driving While Black: Racial Profiling on Our Nation's Highways*<sup>105</sup> was a nascent effort to examine the issue. Notwithstanding its claim that "[t]he data are irrefutable," the study was comprised largely of rather unreliable narratives of lawsuits filed by the ACLU against various jurisdictions.<sup>106</sup> Although there was some rudimentary reliance on quantitative data, the study was primarily anecdotal.<sup>107</sup> However, it should be noted that in 1999, data collection on racial profiling was in its infancy; the report recommended that the fifty largest cities in the United States should "voluntarily collect traffic stop data."<sup>108</sup>

*Racial Bias in Motor Vehicle Searches: Theory and Evidence*<sup>109</sup> was an early quantitative effort. It implicitly condemned, yet attempted to compensate for, previously-used research indicating "that the proportion of African-Americans among the drivers searched by police far exceeds the proportion in the general population of drivers."<sup>110</sup> It proposed a mathematical model for isolating an underlying variable for racial profiling, and drew the distinction between "statistical discrimination," and ordinary racial prejudice (*animus*).<sup>111</sup> Statistical profiling occurs when an officer relies upon race as one factor, among others, to maximize, in his or her own mind, successful search criteria, wherein race can be a valid predictor of

110 P.3d 1271, 1274 (Ariz. 2005); *People v. Valencia-Alvarez*, 101 P.3d 1112, 1116 (Colo. Ct. App. 2004); *United States v. Duque-Nava*, 315 F. Supp. 2d 1144, 1160-61 (D. Kan. 2004); *United States v. Hare*, 308 F. Supp. 2d 955, 963 (D. Neb. 2004).

102. Richard J. Lundman & Robert L. Kaufman, *Driving While Black: Effects of Race, Ethnicity, and Gender on Citizen Self-Reports of Traffic Stops and Police Actions*, 41 *CRIMINOLOGY* 195 (2003).

103. *Id.* at 198-99.

104. See, e.g., DAVID A. HARRIS, AM. CIVIL LIBERTIES UNION, *DRIVING WHILE BLACK: RACIAL PROFILING ON OUR NATION'S HIGHWAYS* (1999), available at <http://www.aclu.org/profiling/report/index.html>.

105. *Id.*

106. *Id.* at 27-35.

107. *Id.*

108. *Id.* at 39, 41.

109. John Knowles, Nicola Persico & Petra Todd, *Racial Bias in Motor Vehicle Searches: Theory and Evidence*, 109 J. POL. ECON. 203 (2001).

110. *Id.* at 204.

111. *Id.* at 209-10.

criminality.<sup>112</sup> Ordinary racial prejudice, by contrast, occurs when an officer simply exhibits a taste for harassing members of a particular race.<sup>113</sup>

To detect racial profiling, Knowles, Persico, and Todd relied upon a dataset collected by the Maryland State Police, which was compelled to supply such information by court order, as a result of a lawsuit filed by the ACLU.<sup>114</sup> The data consisted of 1,590 recorded vehicle searches on Interstate Highway 95 in Maryland from January 1995 to January 1999.<sup>115</sup> Variables included the driver's race and sex, vehicle model, make, year, time, date, and location of search, in addition to whether probable cause existed or the search was consensual, whether drug sniffing dogs were deployed, whether drugs were discovered, and if so, type and quantity, as well as the name, but not race, of the officer conducting the search.<sup>116</sup> The dependent variable (effect variable) was "search," but not stops.<sup>117</sup>

The null hypothesis (a statement of the *status quo*, or at least the way things should be) was that "the guilty rate should be the same across [racial] groups."<sup>118</sup> In other words, the premise for their study was that racial profiling did not exist. The authors found that vehicles operated by African-Americans were searched more frequently than those of Whites, but that conviction rates for both races were similar; and that probability of a successful search (finding contraband) varying by race was not statistically significant.<sup>119</sup> Thus, hit rates (finding contraband) and convictions were about equal for Blacks and Whites, but Blacks were searched more often, implying that race was a factor in the decision to search.<sup>120</sup>

Theoretically, according to Knowles, Persico, and Todd, the transaction costs of conducting searches, based solely upon race, should, on average, be higher and therefore less productive than searching without regard to race.<sup>121</sup> This is because transaction costs, such as inability to search others concurrently with the racially-motivated search, unsuccessful searches and unfruitful testimony in court, should exceed any benefit derived as a result of discriminating by race, thereby discouraging such activity in the long run.<sup>122</sup> Ultimately, although disparities in searches based upon race were found to have existed, the authors failed to reject

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112. *Id.* at 210.

113. *Id.*

114. Knowles, Persico & Todd, *supra* note 109, at 215.

115. *Id.* at 216.

116. *Id.*

117. *Id.*

118. *Id.* at 217.

119. John Knowles, Nicola Persico & Petra Todd, *Racial Bias in Motor Vehicle Searches: Theory and Evidence*, 109 J. POL. ECON. 203, 219-22 (2001).

120. *Id.* at 219.

121. *Id.* at 206.

122. *Id.* at 204-05.



their null hypothesis of no racial profiling.<sup>123</sup> Any inequality in the “search” dependent variable was due to “statistical discrimination,” not “racial prejudice” or taste-based discrimination.<sup>124</sup> The authors concluded that no racial prejudice existed against African-Americans in vehicle searches from the Maryland data; although lower conviction rates for Hispanics were “suggestive of prejudice against [them].”<sup>125</sup>

*Racial Profiling or Racist Policing? Bounds Tests in Aggregate Data*<sup>126</sup> was a sequel drawing upon the methodology of Knowles, Persico, and Todd.<sup>127</sup> It relied upon an aggregated dataset of traffic stops and searches from August 28 (the effective date of the data collection law) to December 31, 2000 by over ninety-one percent of Missouri law enforcement agencies.<sup>128</sup> An attempt was made to isolate “statistical” discrimination from prejudicial (“taste-based”) discrimination for three Missouri law enforcement agencies.<sup>129</sup> Statistical discrimination, posited the authors, may be efficient law enforcement because it has the potential to increase successful searches by assisting in identifying suspects; but pure prejudice would be inefficient, due to increased likelihood of unnecessary, unsuccessful searches conducted merely for harassment.<sup>130</sup>

Similar to the null hypothesis of Knowles, Persico, and Todd of equality across racial lines for returns to searches, the authors hypothesized that search success rates should be “equal across all observable groups.”<sup>131</sup> Extending the analysis, the authors assumed that while motorists differ in their propensity to carry contraband, high risk motorists should be inclined to minimize their risk by refraining from carrying contraband.<sup>132</sup> Assuming existence of prejudice, the authors inferred that police would continue to search the group with the minimized risk, thereby resulting in a lower success rate for that group.<sup>133</sup> Such a finding could be inferential of racial profiling.<sup>134</sup> Applying an econometric model to the dataset to test for marginal changes in probability of successful search rates by race for the three Missouri agencies, the authors concluded that African-Americans and Hispanics were victims of “taste-based” discrimination, or

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123. *Id.* at 219-22.

124. Knowles, Persico & Todd, *supra* note 109, at 205.

125. *Id.* at 228.

126. Ruben Hernandez-Murillo & John Knowles, *Racial Profiling or Racist Policing?: Bounds Tests in Aggregate Data*, 45 INT’L ECON. REV. 959 (2004).

127. *Id.* at 960.

128. *Id.* at 967.

129. *Id.* at 965.

130. *Id.*

131. Hernandez-Murillo & Knowles, *supra* note 126, at 960.

132. *Id.* at 985.

133. *Id.* at 960-61.

134. *Id.* at 960.

plain prejudice.<sup>135</sup> Although these groups bore a marginally greater probability of being searched, success of finding contraband during such searches was lower than for Whites.<sup>136</sup>

Critical of data collection conducted by the law enforcement officials themselves, Lundman and Kaufman<sup>137</sup> relied upon self-reporting by citizens, specifically a 1999 national sample conducted by the National Crime Victimization Survey.<sup>138</sup> Referred to as *Contacts between Police and the Public: Findings from the 1999 National Survey*, subjects at least sixteen years old were asked a series of questions about whether they had been victimized by crime and had encountered police contact during the previous twelve months.<sup>139</sup> Only subjects who reported "at least one traffic stop in which they were the driver" (7034 observations) were selected for the study.<sup>140</sup> The authors were trying to isolate socio-economic variables that were used as a pretext for discrimination.<sup>141</sup> Variables not the kind typically reported by law enforcement (odors emanating from the vehicle, conflicting stories among vehicle occupants, items in plain view, vehicle alterations, and so forth) were reported by the citizens.<sup>142</sup> Relevant independent (cause) variables included jurisdiction population size, social class and age of respondent, gender, race/ethnicity, and the respondent's "perception of the legitimacy of the stop," as well as "whether [the] police acted properly."<sup>143</sup> Three dependent (effect) variables<sup>144</sup> were examined: "total traffic stops," "legitimate reason for stop," and "police acted properly."<sup>145</sup> In all models, the authors found that men generally, and African-American men specifically, were more prone to being stopped than either Whites or women.<sup>146</sup> African-Americans and Hispanics were more prone to deny the legitimacy of the stop, which the authors perceived to be problematic due to the resulting erosion of citizen confidence in law enforcement.<sup>147</sup>

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135. *Id.* at 965.

136. Ruben Hernandez-Murillo & John Knowles, *Racial Profiling or Racist Policing?: Bounds Tests in Aggregate Data*, 45 INT'L ECON. REV. 959, 984-86 (2004).

137. Lundman & Kaufman, *supra* note 102.

138. *Id.* at 199.

139. *Id.* at 199-200.

140. *Id.* at 199.

141. *Id.* at 195-96.

142. Lundman & Kaufman, *supra* note 102, at 201-04.

143. *Id.* at 201-04, 206-07.

144. In econometrics, a dependent variable is the effect; independent variables are explanatory. See DAMADOR N. GUJARATI, BASIC ECONOMETRICS 21-22 (3d ed. 1995).

145. Lundman & Kaufman, *supra* note 102, at 200.

146. *Id.* at 204-06.

147. *Id.* at 206, 210.

Use of “triangulated data,” as proposed by the authors, was one solution to the perception of biased data collection by law enforcement.<sup>148</sup> As a three-dimensional check, the authors also promoted sending along third party observers to record not just the demeanor of officers and citizens, but also “to observe and record the race and ethnicity of the many traffic violators who police witness *but choose to leave alone*.”<sup>149</sup> Use of “triangulated data,” however, seems impractical. First, if the third-party observer is supposed to be neutral, how would he or she be selected – by a committee of law enforcement and citizens or from a panel, perhaps, like an arbitrator? Second and more fundamental, how could anyone accurately report what someone else may or may not have observed but chose to ignore? Inevitably, this would necessitate delving into the mind of the subject of the observation. Instead of consciously ignoring a White violator, it is possible that the officer simply became distracted, looked away and missed something. Bias on the part of the observer is unavoidable. The “observed but left alone” variable permits too much discretion, on the part of the officer and the third-party observer alike, to make this variable useful or practical.

Ideological opponents in the racial profiling debate are David A. Harris and Heather Mac Donald.<sup>150</sup> In *Profiles in Injustice*,<sup>151</sup> Harris establishes himself as the chief proponent of the anti-profiling faction; whereas in *Are Cops Racist?*,<sup>152</sup> Mac Donald is a stalwart advocate of including race as a law enforcement variable in the post-September 11, 2001 era. Both of their works are more anecdotal than quantitative; and although both authors cite statistics in support of their respective hypotheses, they rely upon secondary data.<sup>153</sup> What is troubling about the anti-profiling faction is, in MacDonald’s opinion, the lack of a statistical benchmark against which to compare stop and search rates of minorities.<sup>154</sup> If police are searching or arresting more minorities than their proportional representation in the population, it must be because minorities are committing a disproportionately larger share of crime, she opines.<sup>155</sup> Good police are, in Mac Donald’s opinion, color blind, as they see only good guys and bad guys; even though Mac Donald manages to concede the existence of rogue cops who harbor a proclivity for racial prejudice. Mac Donald ad-

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148. *Id.* at 214.

149. *Id.* (emphasis added).

150. MACDONALD, *supra* note 19; DAVID A. HARRIS, *PROFILES IN INJUSTICE: WHY RACIAL PROFILING CANNOT WORK* (2002).

151. *See* HARRIS, *supra* note 150.

152. *See* MACDONALD, *supra* note 19.

153. *See, e.g., id.* at 28-34; HARRIS, *supra* note 150, at 13-14, 79-84.

154. *See* MACDONALD, *supra* note 19, at 15.

155. *Id.*

vocates sweeping stops and frisks on streets as a legitimate means for uncovering illegal weapons, as well as singling out Middle Easterners as suspected terrorists.<sup>156</sup> MacDonald argues that under the rubric of national security, law enforcement is justified in employing almost any available stop, search, and seizure tactic. Hard profiling – using race as the only factor in identifying criminal activity – she condemns; but soft profiling – using race as one factor out of several for suspicion of criminality – she condones.<sup>157</sup>

Opposite Mac Donald, the standard bearer for the anti-profiling faction, is David A. Harris, whose book, *Profiles in Injustice, Why Racial Profiling Cannot Work*, is the antithesis of Mac Donald's *Are Cops Racist?* In Chapter One, a compilation of racial profiling horror stories, including one about Texas Federal District Judge Filemon Vela, Harris hypothesizes that the somewhat benign use of "criminal profiling" has evolved into racial profiling.<sup>158</sup> Not only is racial profiling unethical, immoral, and unconstitutional, argues Harris, it is not even prudent policing, in that it yields less than optimum "hit rates," or probability of finding contraband.<sup>159</sup> Harris lays blame not at the feet of rogue cops who have a taste for discrimination, but at the institutions that produce and nurture them.<sup>160</sup> In that sense, Harris is seeking, and is convinced he has found, evidence of a disparate impact of criminal profiling against minorities at the institutional level, thus transforming what began as criminal profiling into outright discrimination.<sup>161</sup> This transformation traces its origins to a set of observable criminal characteristics compiled in the 1980s by Volusia County, Florida Sheriff Bob Vogel to interdict drug dealers.<sup>162</sup> Eventually, it grew into full-blown racial profiling following adoption and modification of Vogel's techniques by the United States Drug Enforcement Administration (DEA) under the rubric of "Operation Pipeline."<sup>163</sup> As a federal law enforcement agency, the DEA wields tremendous influence upon the war on drugs, from the national level down to the most pedestrian municipality.<sup>164</sup> Harris condemns the DEA

156. *Id.* at 155.

157. *Id.* at 15-16.

158. See HARRIS, *supra* note 150, at 130-31, 48-72.

159. *Id.* at 79-84.

160. Indeed, Harris goes a step further and offers solutions that police departments can implement to reduce racial profiling among their officers. See *id.* at 145-207.

161. *Id.* at 72.

162. *Id.* at 48.

163. See HARRIS, *supra* note 150, at 48-49.

164. The DEA describes its Office of Training as "the preeminent law enforcement training organization," and they offer training to all law enforcement agencies involved in drug trafficking prevention operations. See DEA Training Programs, Mission, <http://www.dea.gov/programs/training/part1.html> (last visited Feb. 24, 2006).

training emulated by law enforcement agencies worldwide as injecting institutional racial prejudice into algorithms for predicting criminality.<sup>165</sup> As an example, he cites to a 1999 DEA report that indicates certain characteristics and factors that officers should look for in spotting heroin dealers.<sup>166</sup> "Predominant wholesale traffickers are Columbian, followed by Dominicans, Chinese, West African/Nigerian, Pakistani, Hispanic, and Indian. Midlevels are dominated by Dominicans, Columbians, Puerto Ricans, African Americans, and Nigerians."<sup>167</sup> From such origins, the hydra of racial profiling has sprung many heads.<sup>168</sup> Harris continues by describing the most egregious cases of racial profiling, now well-known and oft-cited, in New Jersey, Maryland, Florida, Illinois, and elsewhere.<sup>169</sup>

*The Wichita Stop Study*<sup>170</sup> utilized a dataset of 37,454 traffic stops by the Wichita, Kansas Police Department.<sup>171</sup> A statistical model was developed to predict marginal propensity for being searched.<sup>172</sup> Included in the equation were officer-related criteria, citizen race or ethnicity, arrest or search resulting from the stop, location, driver age, and other variables.<sup>173</sup> Based upon this model, the author concluded that in Wichita during the period in question, both race and ethnicity played roles in search probability, and that African-Americans and Hispanics were more prone to being searched than non-Blacks and non-Hispanics.<sup>174</sup>

In a study prepared at the behest of the Texas Branch of the NAACP, *A Statistical Examination of Racial Profiling*,<sup>175</sup> Steward and Berg examined search rates between minority and White Texas motorists.<sup>176</sup> Two caveats are noteworthy. First, since this study was prepared expressly for an advocacy coalition, it suffers from at least the appearance of bias. Second, as the authors cautioned their client, "these results are preliminary," especially in light of the fact that the data were collected in the very "first

165. See HARRIS, *supra* note 150, at 49.

166. *Id.*

167. *Id.* (quoting David Kocieniewski, *New Jersey Argues That the U.S. Wrote the Book on Race Profiling*, N.Y. TIMES, Nov. 29, 2000, at A1).

168. *Id.* at 53-69.

169. Other jurisdictions in which Harris tracks the spread of racial profiling include Colorado, Ohio, and Michigan. See *id.*

170. BRIAN L. WITHROW, *THE WICHITA STOP STUDY* (2002).

171. *Id.* at 11-12.

172. *Id.* at 38.

173. *Id.*

174. *Id.* at 39.

175. DWIGHT STEWARD & M. DOUGLAS BERG, *A STATISTICAL ANALYSIS OF RACIAL PROFILING: A PRELIMINARY STATISTICAL ANALYSIS OF THE SEARCH RATES OF MINORITY AND NON-MINORITY TEXAS MOTORISTS* (2000).

176. *Id.* at 6-7.

round” in Texas in March, 2000.<sup>177</sup> The dataset consisted of approximately 65,000 stops, of which approximately two percent resulted in searches.<sup>178</sup> Thus, the sample size was so minute that, at a minimum, the study is subject to the objection that it was non-representative of the population of Texas motorists. Yet, even with the reservation about the non-representative dataset, the authors concluded that actual observation of African-Americans and Hispanics being searched was approximately two to two-and-a-half times, respectively, more than anticipated.<sup>179</sup>

The FBI has not been remiss in addressing racial profiling. In an article published in the *FBI Law Enforcement Bulletin*, urging law enforcement to assuage a “skeptical public,” Carrick<sup>180</sup> recommended that police forces change the way they write citations and interview forms to include reason for stopping, race, sex, age, and ethnicity of the suspect, type of search, if any, reason for the search, type of contraband, if any, found, and action taken (e.g., ticket, warning, arrest).<sup>181</sup>

Schott<sup>182</sup> recognized the ostensible dichotomy between “legitimate” and “unlawful” use of racial profiling, evocative of Hernández’s and Knowles’s, and Ross and Yinger’s studies of differences between statistical discrimination and racial prejudice.<sup>183</sup> Like Mac Donald, Schott viewed the issue myopically. Racial profiling, he argued, “refers to action taken by law enforcement officers *solely* because of an individual’s race” as distinguished from one of numerous factors entering into a decision by law enforcement.<sup>184</sup>

A more trenchant, albeit abbreviated, analysis in the *FBI Law Enforcement Bulletin* was done by Kruger, an Assistant Attorney General for the state of Maryland.<sup>185</sup> Acknowledging the necessity of reasonable suspicion for stopping a suspect, and the unconstitutionality of detaining anyone on the basis of race, Kruger recognized “[t]here is no one list of

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177. *Id.* at 3, 7.

178. *Id.* at 7.

179. *Id.*

180. Grady Carrick, *Professional Police Traffic Stops: Strategies to Address Racial Profiling*, 69 FBI L. ENFORCEMENT BULL. (2000), available at <http://www.fbi.gov/publications/leb/2000/nov00leb/pdf> (citing Traffic Stop Statistics Act of 1999, S. Res. 821, 106th Cong. (1999)).

181. *Id.* at 9.

182. Richard G. Schott, *The Role of Race in Law Enforcement: Racial Profiling or Legitimate Use?*, 70 FBI L. ENFORCEMENT BULL. (2001), available at <http://www.fbi.gov/publications/leb/2001/nov01leb.pdf>.

183. *Id.* at 24-25; see also ROSS & YINGER, *supra* note 64, at 41.

184. Schott, *supra* note 182, at 25.

185. Karen J. Kruger, *Collecting Statistics in Response to Racial Profiling Allegations*, 71 FBI L. ENFORCEMENT BULL. 8, 8 (2002), available at <http://www.fbi.gov/publications/leb/2002/may2002/may02.pdf>.

factors that gives rise to reasonable suspicion . . . [R]easonable suspicion may not be based on race alone.”<sup>186</sup> Racial profiling, she advocates, is a “zero tolerance” issue for law enforcement.<sup>187</sup> “Officers who do not respond to training and discipline or appear simply immoral have no place in law enforcement.”<sup>188</sup> Admonitions aside, the author proposed a more scientific methodology than did earlier works in the *FBI Law Enforcement Bulletin*.<sup>189</sup> The author suggests that tests should include measures to account for “other behavioral variables” which may reflect cultural or geographical bias, as well as for instance, demographic benchmarks, and the transient nature of interstate highways.<sup>190</sup>

Anecdotal narratives of racial profiling proliferate the news media. Dallas Morning News articles have been forthcoming at a constant and increasingly frenetic pace.<sup>191</sup> Between September and December of

186. *Id.* at 8 (quoting Abraham Abramovsky & Jonathan I. Edelstein, *Pretext Stops and Racial Profiling After Whren v. United States: The New York and New Jersey Responses Compared*, 63 ALB. L. REV. 725, 729 (2000)).

187. *Id.* at 9.

188. *Id.*

189. *Id.* at 9-10.

190. Kruger, *supra* note 185, at 10.

191. See, e.g., Richard Abshire, *Forum Addresses Race, Traffic Stops; Group City Leaders Have ‘Good Discussion’ but No Answers Yet*, DALLAS MORNING NEWS, Mar. 16, 2003, at Q1; Richard Abshire, *Race Gaps in Search, Arrest Rates Seen; Numbers Higher for Hispanic, Black Drivers; Chief Denies Profiling*, DALLAS MORNING NEWS, Feb. 23, 2003, at Q1; Cherie Bell, *Report: Blacks Pulled Over at Higher Rate: Group Only One in City Whose Stops Exceed Driver Representation*, DALLAS MORNING NEWS, Mar. 13, 2003, at T1; Herb Booth, *Traffic Data Show Race Gap; Police Say Several Variables Make Comparisons Difficult*, DALLAS MORNING NEWS, Mar. 21, 2003, at M1; Debra Dennis, *Police Find No Traffic-Stop Bias; Departments Say They Are Meeting State Racial-Profiling Laws*, DALLAS MORNING NEWS, Mar. 7, 2003, at N1; Tanya Eiserer, *Blacks, Hispanics Subjected to More Traffic-Stop Searches; Dallas Chief Says Time is Needed to Interpret Report Required by Law*, DALLAS MORNING NEWS, Mar. 4, 2003, at A1; Tanya Eiserer, *Man Suggests Race Played Role In Stop; Hit-Run Suspects Were White; Black Pedestrian Was Held, Then Released*, DALLAS MORNING NEWS, Apr. 12, 2003, at 1B; Jennifer Emily, *Hispanics Searched More Often; Police Say It’s Too Early to Draw Conclusions on Traffic Stop Data*, DALLAS MORNING NEWS, Mar. 6, 2003, at P1; Katie Fairbank, *Profiling Needed at Airports, Crandall says; American’s Ex-Chief Describes it as a Positive Way to Improve Security*, DALLAS MORNING NEWS, Mar. 21, 2002, at D1; Michael Grabel, *Racial Disparities in Searches Persist: Dallas Traffic Stop Data Similar to Year Before*, DALLAS MORNING NEWS, Mar. 2, 2004, at B1; Kevin Krause, *Racial Gap Seen in Traffic Searches; Official Says 2002 Figures Were Too Small to be Significant*, DALLAS MORNING NEWS, Mar. 12, 2003, at M1; Eric Lichtblau, *Threats and Responses: Law Enforcement; Bush Issues Racial Profiling Ban But Exempts Security Inquiries*, DALLAS MORNING NEWS, June 18, 2003, at A1; Dan Malone, *Racial Profiling Ban Takes Effect: NAACP Leader Touts States Law on Traffic Stops*, DALLAS MORNING NEWS, Jan. 1, 2002, at A25; Connie Piloto, *Racial Profiling Report’s Usefulness Under Scrutiny Data Show Hispanics Searched Most; Records Not Kept For Every Stop*, DALLAS MORNING NEWS, Mar. 16, 2003, at IV; Anuradha Raghunathan, *Texas Shows Highest Rates of Subprime Lending: Experts Worry About Potential for Increase in*

2001, the newspaper published two articles on racial profiling, both dealing with compliance of Texas's racial profiling law.<sup>192</sup> On the day the law became effective, the newspaper published an article on the phenomenon known as "driving while black," reminding readers of previously reported incidents in which minority motorists were twice as likely to be searched by Department of Public Safety troopers, even though "Whites who were searched were twice as likely to be arrested."<sup>193</sup> That same year produced no less than three more articles on the subject, ranging from former American Airlines Chairman and CEO, Robert Crandall, advocating for racial profiling as a security measure for interdiction of terrorism,<sup>194</sup> to allegations of Hispanics being singled out by the Grand Prairie, Texas police department,<sup>195</sup> to assertions of racial profiling playing a role in subprime lending in Texas.<sup>196</sup>

In 2003, a flurry of articles ensued.<sup>197</sup> With fresh data trickling in, and journalists getting their first full glimpse of it, police statewide suddenly found themselves on the defensive.<sup>198</sup> African-Americans and Hispanics in Garland, Texas, reported *The Dallas Morning News*, were more prone to arrest concomitant with motor vehicle stops than Whites or Asians.<sup>199</sup>

*Predatory Practices*, DALLAS MORNING NEWS, June 12, 2002, at D1; Stephanie Sandoval, *Race Gap Exists in Searches; Police Say Traffic-Stop Data Show No Profiling of Hispanics, Blacks*, DALLAS MORNING NEWS, Mar. 6, 2003, at Y1; Jason Trahan, *Area Police Agencies Seek Funds for Cameras Under Profiling Law*, DALLAS MORNING NEWS, Dec. 23, 2001, at A40; Connie Piloto, *Police Ready to Prevent Profiling: Money for Cameras to Record Stops Hinges on Nov. 6 Board Vote*, DALLAS MORNING NEWS, Sept. 3, 2001, at A29; Jason Trahan, *Hispanics Searched More Often; Views Differ on Whether Traffic Stop Data Signal Racial Profiling*, DALLAS MORNING NEWS, May 4, 2002, at Y1.

192. Piloto, *Police Ready to Prevent Profiling*, *supra* note 191; Trahan, *Hispanics Searched More Often*, *supra* note 191.

193. Malone, *supra* note 191.

194. Fairbank, *supra* note 191.

195. Trahan, *Hispanics Searched More Often*, *supra* note 191.

196. Raghunathan, *supra* note 191.

197. See, e.g., Abshire, *Forum Addresses Race, Traffic Stops*, *supra* note 191; Abshire, *Race Gaps in Search, Arrest Rates Seen*, *supra* note 191; Bell, *Report: Blacks Pulled Over at Higher Rate*, *supra* note 191; Booth, *supra* note 191; Dennis, *supra* note 191; Eiserer, *supra* note 191; Eiserer, *Man Suggests Race Played Role In Stop*, *supra* note 191; Emily, *supra* note 191; Krause, *supra* note 191; Lichtblau, *supra* note 191; Piloto, *Racial Profiling Report's Usefulness Under Scrutiny Data Show Hispanics Searched Most*, *supra* note 191; Sandoval, *supra* note 191.

198. See, e.g., Abshire, *Forum Addresses Race, Traffic Stops*, *supra* note 191; Abshire, *Race Gaps in Search, Arrest Rates Seen*, *supra* note 191; Bell, *Report*, *supra* note 191; Booth, *supra* note 191; Dennis, *supra* note 191; Eiserer, *Man Suggests Race Played Role In Stop*, *supra* note 191; Eiserer, *Blacks, Hispanics Subjected to More Traffic-Stop Searches*, *supra* note 191; Emily, *supra* note 191; Krause, *supra* note 191; Lichtblau, *supra* note 191; Piloto, *Racial Profiling Report's Usefulness Under Scrutiny Data Show Hispanics Searched Most*, *supra* note 191; Sandoval, *supra* note 191.

199. Abshire, *Race Gaps in Search, Arrest Rates Seen*, *supra* note 191.



Garland Police Chief Larry Wilson denied the allegations.<sup>200</sup> In March, a similar finding was published in Dallas, Texas. Former Dallas Police Chief, Terrell Bolton, dismissed such allegations as “premature.”<sup>201</sup> Similar findings on search rates for Hispanics were found in Highland Park, Dallas County, University Park, and McKinney.<sup>202</sup> African-Americans were found to be searched more often than Hispanics or Whites in Arlington, Fort Worth, and Denton.<sup>203</sup> Two days later, Allen, Frisco, McKinney, and Plano underwent scrutiny for their arrest rates of Hispanics.<sup>204</sup> Law enforcement denied it and characterized the issue as “way early in the game.”<sup>205</sup> That same day, Grand Prairie was again targeted for its practices against African-American and Hispanic drivers, this time with the benefit of data collected during 2002.<sup>206</sup> Police Chief Glen Hill repudiated reliance on “way-out-of-kilter statistics one way or the other.”<sup>207</sup> The next day, officials in Grapevine and Southlake, Texas announced that the 2002 traffic stop data reflected “no indications of systemic racial profiling.”<sup>208</sup> Reports continued: African-Americans and Hispanics in Lewisville are more than twice as likely than Whites to be searched pursuant to traffic stops,<sup>209</sup> while in Mesquite, only African-Americans were more likely than other races or ethnic groups to be searched concomitant with traffic stops;<sup>210</sup> data in Garland show police arrested twice as many Hispanic and Black motorists than any other race;<sup>211</sup> Irving police “searched Hispanics slightly more than any other race;”<sup>212</sup> more African-Americans searched and arrested than any other racial group in “every southwest Dallas County city,” including Cedar Hill, DeSoto, Duncanville, and Lancaster.<sup>213</sup>

Finally, there was the unfortunate incident involving African-American businessman, Mr. Matthew Turner, an Air Force Reserve Captain, MIT and Harvard Business School graduate, who was handcuffed, arrested,

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200. *Id.*

201. Eiserer, *Blacks, Hispanics Subjected to More Traffic-Stop Searches*, *supra* note 191.

202. *See id.*; *see also* Emily, *supra* note 191; Krause, *supra* note 191.

203. Eiserer, *Blacks, Hispanics Subjected to More Traffic-Stop Searches*, *supra* note 191.

204. Emily, *supra* note 191.

205. *Id.*

206. Sandoval, *supra* note 191.

207. *Id.*

208. Dennis, *supra* note 191.

209. Krause, *supra* note 191.

210. Bell, *supra* note 191.

211. Abshire, *Forum Addresses Race, Traffic Stops*, *supra* note 191.

212. Piloto, *Racial Profiling Report's Usefulness Under Scrutiny*, *supra* note 191.

213. Booth, *supra* note 191.

then released after about an hour, on suspicion of failure to stop and render aid (hit and run) while in Dallas on business.<sup>214</sup> He was the wrong man.<sup>215</sup> The culprit, it seems, was White.<sup>216</sup>

Given this lengthy, abstruse and convoluted background, is it any wonder why so much of the controversy over racial profiling revolves around the fundamental question, "What is it?" Even if reasonable minds could eventually agree on what it is, distinguishing it out from facially-benign practices or patterns deeply-embedded in law enforcement institutions is no mean feat. One hopes that the current state of disarray will not instill renewed vitality into Justice Potter Stewart's trenchant analysis of obscenity in his concurrence in *Jacobellis v. Ohio*: "But I know it when I see it."<sup>217</sup>

### III. LITERATURE REVIEW

"Goodness gracious! Anybody hurt?"

"No'm, Killed a nigger."

Mark Twain, *The Adventures of Huckleberry Finn*<sup>218</sup>

At least since 1999, racial profiling has commanded the attention of the legislative and executive branches of the federal government. That same year, President Bill Clinton directed all federal law enforcement agencies to document and report the race and ethnicity of suspects detained and searched.<sup>219</sup> In 2001, Congressman John Conyers, Jr. (D. 14<sup>th</sup> Dist., Michigan) introduced a bill entitled the "End Racial Profiling Act," requiring racial data collection by all agencies that receive federal funds.<sup>220</sup> This and similar bills introduced at the federal level have never been enacted.<sup>221</sup>

214. Eiserer, *Man Suggests Race Played Role In Stop*, *supra* note 191.

215. *Id.*

216. *Id.*

217. *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Stewart, J., concurring).

218. MARK TWAIN, *THE ADVENTURES OF HUCKLEBERRY FINN* 373 (Planet PDF, 2004) (1884), available at [http://www.planetpdf.com/planetpdf/pdfs/free\\_ebooks/The\\_Adventures\\_of\\_Huckleberry\\_Finn\\_T.pdf](http://www.planetpdf.com/planetpdf/pdfs/free_ebooks/The_Adventures_of_Huckleberry_Finn_T.pdf).

219. TEX. HOUSE OF REPRESENTATIVES HOUSE RESEARCH ORG., RACIAL PROFILING CHARGES: HOW SHOULD TEXAS RESPOND?, S. 76-25, 1st Sess., at 1 (2000).

220. End Racial Profiling Act of 2001, H.R. 2074, 107th Cong. (2001); *see also*, S. 989, 107th Cong. (2001).

221. *See, e.g.*, End Racial Profiling Act of 2005, S. 2138, 109th Cong. (2005); End Racial Profiling Act of 2004, H.R. 3847, 108th Cong. (2004); Racial Profiling Education and Awareness Act of 2002, S. 2114, 107th Cong. (2002); End Racial Profiling Act of 2001 H.R. 2074, 107th Cong. (2001); S. 989; Racial Profiling Prohibition Act of 2001, H.R. 1907, 107th Cong. (2001).

The Texas Department of Public Safety was created on August 10, 1935 to enforce laws related to public safety, and to detect and prevent crime.<sup>222</sup> It was originally composed of six divisions – the Texas Highway Patrol, the Texas Rangers, and Bureaus of Communications, Intelligence, Education, and Identification and Records, all overseen by a three member commission appointed by the Governor to six-year terms.<sup>223</sup> The enabling statute has been codified in the Texas Government Code which currently defines the Department as consisting of the Texas Rangers, the Texas Highway Patrol, the administrative division, “and other divisions that the commission considers necessary.”<sup>224</sup> Commissioned Rangers and officers are peace officers,<sup>225</sup> whose mandate is “to preserve the peace within their [the officer’s] jurisdiction.”<sup>226</sup> Their powers include crime suppression and “interference without warrant,” execution of lawful judicial process, notifying magistrates of criminal offenses which an officer “has good reason to believe” have been committed in the officer’s jurisdiction, arresting criminal offenders “without warrant” and taking them before a proper magistrate, and certain child custody powers.<sup>227</sup>

The Texas Highway Patrol consists of the chief patrol officer, captains, sergeants, privates, as well as administrative and clerical personnel.<sup>228</sup> “The chief patrol officer is the executive officer” of the Highway Patrol.<sup>229</sup> Highway Patrol officers have the power and authority of the Texas Rangers.<sup>230</sup> Texas Rangers have the powers and duties of sheriffs, in addition to making arrests, executing criminal process “in any county,” and if ordered by a court of record, executing process in civil cases.<sup>231</sup> Therefore, one can conclude, that the law enforcement jurisdiction of DPS officers in Texas for all practical purposes is plenary.

Racial profiling by any Texas peace officer is prohibited.<sup>232</sup> When an officer stops a driver or pedestrian for any alleged violation, they must collect, and report to their employing agency, data pertaining to the suspect’s physical description, gender, and “race or ethnicity,” as disclosed

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222. Laurie E. Jasinski, *Texas Department of Public Safety*, The Handbook of Texas Online, <http://www.tsha.utexas.edu/handbook/online/articles/TT/mctrp.html> (last visited Mar. 11, 2006).

223. *Id.*

224. TEX. GOV’T CODE ANN. § 411.002(a) (Vernon 2005).

225. TEX. CODE CRIM. PROC. ANN. art. 2.12(4) (Vernon Supp. 2005).

226. TEX. CODE CRIM. PROC. ANN. art. 2.13(a) (Vernon 2005 & Supp. 2005).

227. TEX. CODE CRIM. PROC. ANN. art. 2.13(b) (Vernon 2005 & Supp. 2005).

228. TEX. GOV’T CODE ANN. § 411.031 (Vernon 2005).

229. § 411.031.

230. TEX. GOV’T CODE ANN. § 411.032 (Vernon 2005).

231. TEX. GOV’T CODE ANN. § 411.022(a) (Vernon 2005).

232. TEX. CODE CRIM. PROC. ANN. art. 2.131 (Vernon 2005 & Supp. 2005).

by the suspect to the officer.<sup>233</sup> If a suspect refuses to disclose the information, then the officer must record the race or ethnicity “as determined by the officer to the best of the officer’s ability.”<sup>234</sup> Law enforcement agencies are required to “compile and analyze” these data, and no later than March 1 of every year, submit to the agency’s appropriate governing authority a report disclosing the data collected during the prior calendar year.<sup>235</sup> At a minimum, the report must include a “comparative analysis” of the data, for the purpose of ascertaining the “prevalence,” if any, of racial profiling occurring within the agency, an examination of disposition of stops, including searches, and a compilation of complaints against officers within the agency alleging incidents of racial profiling.<sup>236</sup>

The racial profiling statute applies to all municipal, county, state, and “other political subdivisions” (e.g., educational institutions, transit and airport authorities) that employ peace officers who make stops in Texas.<sup>237</sup> As defined by the statute, “race or ethnicity” means “of a particular descent, including Caucasian, African, Hispanic, Asian, or Native American . . .”<sup>238</sup> All Texas law enforcement agencies are required to promulgate a “detailed written policy” including:

- (1) a definition of racial profiling;
- (2) a ban against officers from engaging in racial profiling;
- (3) a complaint procedure for persons who believe they have been subject to racial profiling;
- (4) a public education program about the racial profiling complaint procedure;
- (5) a program for remediation of officers found to have engaged in racial profiling; and
- (6) a requirement for data collection, including the suspect’s race or ethnicity, and whether a search was conducted (including whether consensual or not), whenever a traffic stop resulted in issuance of a citation.<sup>239</sup>

One problematic provision in the statutory scheme is exemption from articles 2.133 and 2.134 data collection requirements for law enforcement agencies and individual officers, if the agency equips its vehicles and motorcycles with video cameras to record data.<sup>240</sup> While video cameras

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233. TEX. CODE CRIM. PROC. ANN. art. 2.133(b) (Vernon 2005 & Supp. 2005).

234. § 2.133(b).

235. TEX. CODE CRIM. PROC. ANN. art. 2.134(b) (Vernon 2005 & Supp. 2005).

236. TEX. CODE CRIM. PROC. ANN. art. 2.134(c)(1) (Vernon 2005 & Supp. 2005).

237. § 2.134(c)(1).

238. TEX. CODE CRIM. PROC. ANN. art. 2.132(a)(2) (Vernon 2005 & Supp. 2005).

239. TEX. CODE CRIM. PROC. ANN. art. 2.132(b) (Vernon 2005 & Supp. 2005).

240. art. 2.132(b).

may be capable of accurately memorializing visual and audio data, it would be a monumental, if not insurmountable, task to organize and manage these data into a meaningful quantitative format for statistical analysis. In examining racial profiling, for example, how many stops were made, how many stops resulted in searches, how many searches were consensual or the result of probable cause, how many suspects of each race or ethnicity were searched, and discovery of contraband, are but some of the more salient variables that require quantification.<sup>241</sup> Although such variables could conceivably be gleaned from videotape, it would require a staff of technicians to view and interpret the images while recording the data, which of course, leaves room for human bias and contamination in translation of images into quantified format. Perhaps video data could prove useful in proving instances of disparate treatment (individualized animus) against a particular suspect, but it might well be worthless for analyzing disparate impact against groups-at-large, i.e., wholesale racial profiling.<sup>242</sup> Unless or until this conundrum is resolved, use of video cameras to memorialize data, as attractive as the idea may seem, will prove to be of dubious value in detecting racial profiling.

Statutory construction of this exemption results in a serious ambiguity.<sup>243</sup> The video camera exemption does not apply to "the collection or reporting requirements under Article 2.132" of the Texas Code of Criminal Procedure.<sup>244</sup> Article 2.132 requires agencies to collect data on racial profiling.<sup>245</sup> But individual officers are exempt from reporting requirements under article 2.133, and agencies are exempt from "compilation, analysis, and reporting requirements under Article 2.134" if video equipment is employed.<sup>246</sup> The gravamen of the ambiguity is which section (if any) of the article 2.132 collection and reporting requirement remains intact if an agency employs video equipment? It would appear to be the Article 2.132(b) (7) annual report of the agency to its political governing authority.<sup>247</sup> But if individual officers are exempt from collecting and reporting racial profiling data, as well as agencies being exempt from com-

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241. For examples of how such studies are conducted please consult the following sources: WITHROW, *supra* note 170; Knowles, Persico & Todd, *supra* note 109; STEWARD & BERG, *supra* note 175.

242. This position has been adopted by the American Civil Liberties Union. See *The Benefits of Audio-Visual Technology in Addressing Racial Profiling: Hearing Before the House Comm. on Government Reform*, 107th Cong. 117-19 (2001) (statement of Rachel King, Legislative Counsel, American Civil Liberties Union), available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107\\_house\\_hearings&docid=f:77191.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_house_hearings&docid=f:77191.pdf).

243. art. 2.132(b).

244. TEX. CODE CRIM. PROC. ANN. art. 2.135(c) (Vernon 2005).

245. art. 2.132(b).

246. TEX. CODE CRIM. PROC. ANN. art. 2.135(a)(1) (Vernon 2005).

247. art. 2.132(b)(7).

piling and analyzing those data, which substantive requirements remain resolute? Only a vast conglomeration of videotapes it seems. And if that were all that remained, how could an agency possibly compile its annual report for submission to its governing authority under Article 2.132(b) (7)? Simply dump all annual videotapes at city hall and let the public sort through them? That may very well be the case with the statute as currently written.

It thus appears the statutory effect of the video camera exemption restricts racial profiling data to an atomistic level. If an individual were to complain of racial profiling, a videotape of that particular arrest could be retrieved for review.<sup>248</sup> Use of videotape images, however, is practically useless in managing the type of large scale quantitative data necessary for meaningful policy purposes. To exacerbate matters, even the useful life of the videotapes themselves is quite limited.<sup>249</sup> Under Article 2.135, the exemption section of the statute, agencies need to retain videotapes for only 90 days following a stop, unless a citizen files a racial profiling complaint against an individual officer, in which case that tape must be retained pending resolution of the complaint.<sup>250</sup> The upshot is that an aggrieved citizen must act expeditiously in lodging a complaint, which in all likelihood would necessitate retaining an attorney; otherwise the evidence will be forever destroyed.<sup>251</sup> Such evisceration of the statutory requirements might lend credibility to criticism that the Texas Legislature may have been more interested in a placebo, rather than a prophylactic, approach toward racial profiling, which ultimately fails to address the problem.<sup>252</sup>

Under its own administrative rules, as far as the Texas Department of Public Safety is concerned, all typical black and white DPS patrol cruisers have been video equipped, and all DPS troopers must videotape and audiotape every stop they make.<sup>253</sup> DPS troopers are still required to collect and report the data required by the Texas Code of Criminal Procedure.<sup>254</sup> Under DPS rule 1.114, racial profiling is included in a laundry list of major infractions, commission of any one of which could result in

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248. See art. 2.135(b).

249. art. 2.135(b).

250. art. 2.135(b).

251. art. 2.135(b).

252. The debate over what measures would effectively prohibit the use of racial profiling took place in the Texas Legislature during the 77th session. It appears that these concerns were taken into consideration when crafting the current racial profiling statute. See HOUSE RESEARCH ORG., TEX. HOUSE OF REPRESENTATIVES, *supra* note 219, at 6 (2000).

253. TEX. DEP'T OF PUB. SAFETY, TRAFFIC STOP DATA REPORT 4 (2000), available at [http://www.txdps.state.tx.us/director\\_staff/public\\_information/trafrep2q00.pdf](http://www.txdps.state.tx.us/director_staff/public_information/trafrep2q00.pdf).

254. TEX. CODE CRIM. PROC. ANN. art. 2.132(a)(1) (Vernon 2005).

discharge, suspension, demotion or removal of a trooper.<sup>255</sup> Department of Public Safety management also has issued a directive prohibiting vehicle stops and/or searches based upon "race, ethnic origin, gender, or economic status."<sup>256</sup> The video camera exemption, therefore, is not being used by the DPS to circumvent quantitative data collection.

Finally, the Texas Education Code addresses the vital issue of educating law enforcement pertaining to racial profiling.<sup>257</sup> At the top administrative level, the Bill Blackwood Law Enforcement Management Institute of Texas, responsible for providing initial and continuing education for police chiefs, is directed to include a "program on racial profiling."<sup>258</sup> Included in the program must be "best practices" for monitoring peace officers' adherence to laws and agency regulations on racial profiling, effectuating laws and regulations to prevent racial profiling, and collecting and analyzing racial profiling data.<sup>259</sup> Finally, in order to receive an "intermediate proficiency certificate" in law enforcement, all peace officers must satisfactorily complete a training program on racial profiling.<sup>260</sup>

Judicially, there is a dearth of published opinions addressing racial profiling by appellate courts.<sup>261</sup> In Texas, the only appellate opinions have summarily dismissed claims of racial profiling, primarily due to a complete lack of, or insufficient at best trial evidence.<sup>262</sup> Evidence to support the allegation, in other words, was either insufficient or non-existent at trial, beyond the uncorroborated allegation or pleading of racial profiling.<sup>263</sup> In *Ducksworth v. Texas*,<sup>264</sup> the appellant's *pro se* racial profiling point of error was overruled due to the fact that there was no record before the Court of Appeals.<sup>265</sup> Racial profiling was raised as an issue in a motion to suppress in *Chambers v. Texas*.<sup>266</sup> Although the trial court's overruling the motion was raised as an appellate point of error, the Court

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255. 37 TEX. ADMIN. CODE § 1.114(b) (2004) (Public Safety and Corrections).

256. TEX. DEP'T OF PUB. SAFETY, *supra* note 253, at 3.

257. TEX. EDUC. CODE ANN. § 96.641 (Vernon 2005).

258. § 96.641.

259. § 96.641(j).

260. TEX. OCC. CODE ANN. § 1701.402(e) (Vernon 2005).

261. See e.g., *United States v. Bell*, 86 F.3d 820 (8th Cir. 1996); *Jones v. Sterling*, 110 P.3d 1271 (Ariz. 2005); *People v. Valencia-Alvarez*, 101 P.3d 1112 (Colo. Ct. App. 2004).

262. *Chambers v. State*, No. 12-02-00116-CR, 2002 Tex. App. LEXIS 8466 (Tex. App.-Tyler Nov. 27, 2002, pet. ref'd); *Ducksworth v. State*, Nos. 01—01-00065-CR, 01-01-00066-CR, 2002 Tex. App. LEXIS 4018 (Tex. App.—Houston [1st Dist.] May 30, 2002, no pet.).

263. *Chambers*, 2002 Tex. App. LEXIS 8466, at \*15-17; *Ducksworth*, 2002 Tex. App. LEXIS 4018, at \*5-6.

264. *Ducksworth*, 2002 Tex. App. LEXIS 4018.

265. *Id.* at \*5-6.

266. *Chambers*, 2002 Tex. App. LEXIS 8466, at \*15-17.

of Appeals failed to address the racial profiling issue.<sup>267</sup> In one case where the issue had been properly raised at trial, the evidence never went beyond the uncorroborated testimony of the arresting officer, who unsurprisingly denied engaging in racial profiling on cross examination.<sup>268</sup> In an application for a writ of *habeas corpus*, one applicant alleged that "his arrest was based solely upon racial profiling without probable cause or reasonable suspicion."<sup>269</sup> The trial court denied the writ, and the Court of Appeals affirmed, finding no abuse of trial court discretion.<sup>270</sup>

In jurisdictions beyond Texas, several interesting racial profiling cases have reached fruition, but none at the appellate level. All of these cases have settled, some extremely expeditiously. Many have been filed by the American Civil Liberties Union; one was filed by the United States; and still another was filed against it. *United States v. New Jersey*<sup>271</sup> was an early attempt.<sup>272</sup> Filed on December 22, 1999, and settled exactly one week later, the state obviously was aware of the imminent filing of this lawsuit.<sup>273</sup> It was lodged by the U.S. Justice Department against New Jersey and its state police agency, alleging racial profiling in traffic stops and searches.<sup>274</sup> Its purpose, to implement changes in the way the state trained its troopers and how they conducted stops and searches, was reflected in a comprehensive settlement agreement and subsequent court mandated status reports prepared by the New Jersey Attorney General.<sup>275</sup> Under paragraph 29(a) of that agreement, the state has adopted procedures for all its troopers, operating marked or unmarked vehicles, to collect extensive written data relating to each stop and/or search. Included in the data are race, ethnicity, and gender of the driver and any passengers asked "to exit the vehicle, frisked, searched, requested to consent to a vehicle search, or arrested . . ."<sup>276</sup>

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267. *Id.*

268. *Brumfield v. State*, No. 09-01-509-CR, 2002 Tex. App. LEXIS 8965, at \*4-5 (Tex. App.—Beaumont Dec. 19, 2002, no pet.).

269. *Ex Parte Brooks*, 97 S.W.3d 639, 639 (Tex. App.-Waco 2002, no pet.).

270. *Id.* at 640.

271. *United States v. New Jersey*, No. 99-CV-5970 (U.S.D.C. NJ, Trenton, 1999). "Progress/Status Summary of the Consent Decree Entered into by the United States of America and the State of New Jersey Regarding the New Jersey Division of State Police." State of New Jersey Department of Law and Public Safety Office of the Attorney General (Apr. 27, 2000).

272. Consent Decree, *United States v. New Jersey*, No. 99-CV-5970, 1 (U.S.D.C. N.J. Trenton 1999).

273. *Id.*

274. *Id.*

275. Consent Decree, *United States v. New Jersey*, No. 99-CV-5970 (U.S.D.C. N.J. Trenton 1999).

276. *United States v. New Jersey*, No. 99-CV-5970 (U.S.D.C. NJ, Trenton, 1999). "Progress/Status Summary of the Consent Decree Entered into by the United States of



Also in New Jersey a civil action was filed by the ACLU.<sup>277</sup> The plaintiffs were African-Americans.<sup>278</sup> Thomas White, a retired corrections officer from Philadelphia, Fred Hamiel, a former hair salon owner (also retired), and Tyrone Hamilton, a juvenile corrections officer, had been stopped and searched on the New Jersey State Turnpike.<sup>279</sup> All three had been stopped twice before on the same turnpike.<sup>280</sup> Thomas White was never issued a ticket.<sup>281</sup> Tyrone Hamilton was stopped, released without charge, then stopped again minutes later by a different trooper, who confided in him that if he had told the trooper he was a corrections officer, the trooper would not have issued him a ticket.<sup>282</sup> Both Fred Hamiel and his brother, whose leg was in a cast, were ordered out of their car and subjected to total body frisks and a vehicle search.<sup>283</sup> This was the second such incident for Hamiel.<sup>284</sup> Three years after the suit was filed, the New Jersey State Police agreed to pay the plaintiffs a total of \$250,000.<sup>285</sup>

In another New Jersey suit filed in state court,<sup>286</sup> the state agreed to pay Morka, an Egyptian-American, Maher, a Nigerian national, and ten other plaintiffs a total of \$775,370 as settlement.<sup>287</sup> Of this amount, \$100,000 was contributed by the New Jersey Turnpike Authority.<sup>288</sup> According to the allegations of the suit, Morka was physically assaulted and Maher was threatened with a gun held to her by troopers on the turnpike.<sup>289</sup> When the plaintiffs tried to file an internal complaint, they were provided the wrong forms.<sup>290</sup> Subsequently, the police neglected or refused to finalize an investigation of the complaint.<sup>291</sup>

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America and the State of New Jersey Regarding the New Jersey Division of State Police." State of New Jersey Department of Law and Public Safety Office of the Attorney General (Apr. 27, 2000).

277. *White v. Williams*, 208 F.R.D. 123 (D. N.J. 2002).

278. *Id.* at 125.

279. *Id.* at 125-29.

280. *Id.* at 126-29.

281. *Id.* at 127.

282. *White*, 208 F.R.D. at 128.

283. *Id.* at 127.

284. *Id.*

285. Press Release, American Civil Liberties Union, *ACLU of PA Secures Settlement for NJ Turnpike Racial Profiling Victims* (Aug. 20, 2002), <http://www.aclu.org/racialjustice/racialprofiling/15857prs20020820.html>.

286. Press Release, American Civil Liberties Union, *ACLU of NJ Wins \$775,000 for Victims of Racial Profiling by State Troopers* (Jan. 13, 2003), <http://www.aclu.org/racialjustice/racialprofiling/15871prs20030113.html>.

287. *Id.*

288. *Id.*

289. *Id.*

290. *Id.*

291. Press Release, American Civil Liberties Union, *supra* note 286.

In other noteworthy cases across the country, the ACLU has obtained settlements from the state of Maryland,<sup>292</sup> and the California Highway Patrol (CHP).<sup>293</sup> Other jurisdictions still resting in the crosshairs of the ACLU include West Virginia,<sup>294</sup> Illinois,<sup>295</sup> Rhode Island,<sup>296</sup> and even the United States itself.<sup>297</sup> Notably, Texas is not on the list.

The ACLU has successfully sued the United States Transportation Security Administration for alleged racial profiling.<sup>298</sup> *Rajcoomar v. United States*,<sup>299</sup> was filed in the United States District Court for the Eastern District of Pennsylvania on April 14, 2003<sup>300</sup> and was settled about 10 weeks later, on June 30, 2003.<sup>301</sup> Suit was filed pursuant to the Federal Tort Claims Act, other statutory authorities, and the Fourth and Fifth Amendments to the Constitution of the United States.<sup>302</sup>

Rajcoomar, a doctor and former Lieutenant Colonel in the United States Army Reserve, and his wife were passengers on a commercial air-

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292. Press Release, American Civil Liberties Union, *ACLU Civil Rights Groups and Maryland Officials Reach Landmark Racial Profiling Settlement* (Apr. 2, 2003), <http://www.aclu.org/racialjustice/racialprofiling/15888prs20030402.html>.

293. Press Release, American Civil Liberties Union, *ACLU of Northern CA Hails Landmark Racial Profiling Settlement* (Feb. 27, 2003), <http://www.aclu.org/racialjustice/racialprofiling/15875prs20030227.html>.

294. Press Release, American Civil Liberties Union, *ACLU of West Virginia Marks One Year Anniversary of Racial Profiling Incident by Filing Lawsuit Against Charleston Police* (Apr. 30, 2003), <http://www.aclu.org/racialjustice/racialprofiling/15882prs20030430.html>.

295. Press Release, American Civil Liberties Union, *Illinois Residents; Fight Racial Profiling in Illinois* (Mar. 17, 2003), <http://www.aclu.org/racialjustice/racialprofiling/15894res20030317.html>.

296. Press Release, American Civil Liberties Union, *New State Study Confirms Rampant Racial Profiling in Rhode Island; ACLU, Community Groups Call for "Concrete Action"* (July 1, 2003), <http://www.aclu.org/racialjustice/racialprofiling/15808prs20030701.html>.

297. Press Release, American Civil Liberties Union, *ACLU Says New Justice Department Racial Profiling Policy Lacks Enforcement Tool, Suffers From Huge National Security Loophole* (June 17, 2003), <http://www.aclu.org/racialjustice/racialprofiling/15810prs20030617.html>.

298. Press Release, American Civil Liberties Union, *Government Settles ACLU's Racial Profiling Lawsuit Against TSA, Agrees to Alter Agency Procedures Nationwide* (July 31, 2003), <http://www.aclu.org/safefree/general/16806prs20030731.html>.

299. Press Release, American Civil Liberties Union, *Complaint in Racial Profiling Lawsuit Against Transportation Security Administration* (Apr. 14, 2003), [http://www.aclufl.org/legislature\\_courts/legal\\_department/briefs\\_complaints/rajcoomarcomplaint.cfm](http://www.aclufl.org/legislature_courts/legal_department/briefs_complaints/rajcoomarcomplaint.cfm).

300. Press Release, American Civil Liberties Union, *supra* note 299.

301. *Rajcoomar v. United States*, No. 2:03-cv-02294-JF (D. Pa. 2003) (PACER).

302. Press Release, American Civil Liberties Union, *supra* note 299.

liner flying from Atlanta to Philadelphia.<sup>303</sup> According to one source, following a disturbance on the plane, in which the Rajcoomars played no part, U.S. “air marshals held passengers at gunpoint and refused to allow anyone to get up.”<sup>304</sup> Upon arrival in Philadelphia, Dr. Rajcoomar was placed in police custody and taken to jail.<sup>305</sup> He and his belongings were searched.<sup>306</sup> After asking why he had been arrested, he was refused explanation.<sup>307</sup> He was booked and held in a “foul-smelling cell” for four hours.<sup>308</sup> According to the complaint, “the only explanation ever provided by the TSA agents consisted of the following two statements:”

- (i) “We didn’t like the way you look,” and
- (ii) “We didn’t like the way you looked at us.”<sup>309</sup>

A TSA spokesperson maintained that Dr. Rajcoomar “had been observing [the air marshals] too closely” aboard the flight.<sup>310</sup> Damages of \$50,000 were awarded to Dr. Rajcoomar.<sup>311</sup>

In Texas, only one published appellate opinion has at least obliquely addressed the issue of racial profiling.<sup>312</sup> Edward Pruneda was found guilty of possessing less than 2000, but more than 50 pounds of marijuana, and had been stopped for speeding by DPS Trooper Bob Powell.<sup>313</sup> After being told that Powell would request the canine unit if Pruneda refused to a consensual search, Pruneda consented.<sup>314</sup> The trial court denied Pruneda’s requested jury instruction on racial profiling, which Pruneda raised on appeal as point of error number one.<sup>315</sup> Acknowledging the statutory prohibition against its use, the Court of Appeals agreed that any evidence seized in violation of a defendant’s constitutional rights must be excluded from consideration at trial.<sup>316</sup>

A trial court is required to include an Article 38.23 instruction [to disregard illegally obtained evidence] in the jury charge only if there is a factual dispute as to how the evidence was obtained. However there was

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303. Press Release, American Civil Liberties Union, *ACLU Files Racial Profiling Lawsuit Against Transportation Security Administration* (Apr. 14, 2003), <http://www.aclu.org/safefree/general/17339prs20030414>.

304. *Id.*

305. Press Release, American Civil Liberties Union, *supra* note 299.

306. *Id.*

307. *Id.*

308. *Id.*

309. *Id.*

310. Press Release, American Civil Liberties Union, *supra* note 303.

311. *Rajcoomar v. United States*, No. 2:03-cv-02294-JF (D. Pa. 2003).

312. *Pruneda v. Texas*, 104 S.W. 3d 302 (Tex. App. – Texarkana, 2003, pet. ref’d).

313. *Id.* at 304.

314. *Id.* at 304-05.

315. *Id.* at 305.

316. *Id.*

no evidence presented at trial to show the further detention of Pruneda was based on racial profiling.<sup>317</sup>

The only evidence of racial profiling elicited at trial was defense counsel's cross examination of Powell, as follows:

[Q:] The decision to keep him from beyond – the decision that instead of issuing a warning ticket, you're going to call for the canine unit, call for the backup, and hold him there further, was that, in any way, based on the fact that he's Hispanic and out of state?

[A:] No, sir, I stop a lot of people on the side of the road. I had no idea who he was when I stop [*sic*] the vehicle. At the time I stopped the vehicle, whether or not he's Hispanic, white, black, Asian, it doesn't matter to me. If I feel like everything's okay, I will let them go. But under the circumstances, and under my past experience of working as a Trooper on the highways, that's the reason I kept him. I thought there was enough [probable cause] to . . . ask him for his consent to search the vehicle.<sup>318</sup>

The Court noted by dicta that no statistical evidence was presented at trial that either the law enforcement agency or the arresting officer had engaged in racial profiling.<sup>319</sup> From this, attorneys should be acutely aware that if a criminal defendant, or a plaintiff in a civil suit, expects to rely upon racial profiling as either sword or shield, the issue should be properly pleaded and proven by competent expert testimony and statistics. As the Supreme Court cautioned in *Watson v. Fort Worth Bank and Trust*:<sup>320</sup> “[C]ausation must be proved. . . . Our formulations, which have never been framed in terms of any rigid mathematical formula, have consistently stressed that statistical disparities must be sufficiently substantial that they raise such an inference of causation.”<sup>321</sup> Mere allegation, innuendo, or uncorroborated testimony will be insufficient to support any claim of racial profiling.<sup>322</sup>

What then are the origins of racial profiling by state officials? Harris attributes it to a bastardization of a “means of identifying drug couriers on the highways in the 1980s,” devised by Sheriff Bob Vogel of the Volusia County, Florida Sheriff's Department.<sup>323</sup> Race, according to that author's description of Vogel's technique, “was never part of his method; it

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317. *Pruneda*, 104 S.W.3d at 305.

318. *Id.* at 305-06.

319. *Id.* at 306.

320. *Watson v. Fort Worth Bank & Trust*, 487 U.S. 977 (1988).

321. *Id.* at 994-95.

322. *Id.*

323. See HARRIS, *supra* note 150, at 62.

was never a factor.”<sup>324</sup> It was supposed to have been racially benign.<sup>325</sup> It was Operation Pipeline, the brainchild of the United States Drug Enforcement Agency (DEA), according to both Harris, and Gross and Barnes (2002), that provided the impetus for using race as a proxy variable for predicting proclivity for couriering drugs.<sup>326</sup>

So how did the transformation from a purportedly racially benign origin to a racially relevant law enforcement technique evolve? According to Harris, and Gross and Barnes, the culprit is training.<sup>327</sup> Visual aids, such as training videos promulgated by the DEA and distributed to law enforcement agencies nationwide, tended to characterize particular racial groups as fitting the profile of drug dealers.<sup>328</sup> As noted in a 1999 DEA report cited by Harris: “Predominant wholesale traffickers are Columbian, followed by Dominicans, Chinese, West African/Nigerian, Pakistani, Hispanic, and Indian. Midlevels are dominated by Dominicans, Columbians, Puerto Ricans, African-Americans and Nigerians.”<sup>329</sup>

Quoting allegations surrounding a lawsuit brought by Colonel Carl Williams, fired from his position with the New Jersey State Police, Gross and Barnes cite Williams’ averment that racial profiling was essentially good policing.<sup>330</sup> Williams averred that according to the website posted by the United States Office of National Drug Control Policy, “in Trenton, New Jersey, ‘crack dealers are predominantly African-American males,’ powder cocaine dealers are ‘predominantly Latino,’ heroin traffickers are ‘mostly Latinos,’ and the marijuana market is ‘controlled by Jamaicans.’”<sup>331</sup> If racial profiling exists at an institutional level in the Texas Department of Public Safety, it can be a function of one or several factors, or a combination of them. Preexisting racial prejudices on the part of individual troopers, embedded stereotypes reinforced by institutional practices, tradition, pure chance (white noise), or any combination of them, may be possible.

Equally vexing, is how racially charged images embed themselves into high level law enforcement in the first place? While absolute certainty is never attainable, the answer may lie in the human propensity to stereotype. Stereotyping, or to generalize based upon perceptions, is a normal

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324. *Id.* at 48.

325. *Id.*

326. *Id.*; see also Samuel R. Gross & Katherine Y. Barnes, *Road Work: Racial Profiling and Drug Interdiction on the Highway*, 101 MICH. L. REV. 651, 671-72 (2002).

327. See HARRIS, *supra* note 150, at 48; see also, Gross & Barnes, *supra* note 326, at 671-72.

328. See HARRIS, *supra* note 150, at 49-50.

329. *Id.* at 49.

330. Gross & Barnes, *supra* note 326, at 653-54.

331. *Id.* at 654.

human trait. Psychologists proffer two diverging theories for the human tendency to stereotype – motivational and social cognition.<sup>332</sup>

In 1932, Katz and Braly<sup>333</sup> conducted an experiment, known as the trait checklist, in which 100 Princeton University students were provided a list of 84 personality traits, such as industrious, intelligent, frugal, and artistic.<sup>334</sup> Subjects were asked to match those traits with ten ethnic groups and nationalities, such as English, German, Italian, Jewish, and Black.<sup>335</sup> That there was a high degree of consensus among the subjects as to group characteristics led the authors to conclude that stereotypes shared commonalities.<sup>336</sup> Thus, among the subjects of the study, the English were perceived as sportsmanlike and traditional, Americans as materialistic and ambitious, and Germans as industrious.<sup>337</sup> Replications by Gilbert<sup>338</sup> and Karlins<sup>339</sup> resulted in similar findings over a 35 year period.<sup>340</sup> Such robustness across time and subjects led psychologists to infer that stereotypes were the result of inaccurate and inflexible thinking.<sup>341</sup> Katz and Braly argued their study led to the conclusion that stereotypes arose only “so long as individuals accept consciously or unconsciously the group fallacy attitude toward place of birth and skin colour.”<sup>342</sup>

Following the footsteps of Katz and Braly, motivational theorists held that stereotyping was the result of faulty thinking, especially insofar as derogatory stereotypes were perpetrated.<sup>343</sup> From this it was surmised that stereotypical thinking should be corrected, because it reflected false and prejudicial notions of reality.<sup>344</sup> Brigham, for example, held that “most writers agree that stereotypes are undesirable and should be eradicated.”<sup>345</sup> The touchstone of motivational theory assumes that anti-social stereotypes involve some degree of rationality, intent, or motivation.<sup>346</sup>

332. PERRY R. HINTON, *STEREOTYPES, COGNITION AND CULTURE* 14, 20 (2000).

333. *Id.* at 9-10.

334. D. Katz & K.W. Braly, *Racial Prejudice and Racial Stereotypes*, 30 *J. ABNORMAL & SOC. PSYCHOL.* 175 (1933), *construed in* HINTON, *supra* note 332, at 10.

335. *Id.*

336. *Id.*

337. *Id.*

338. G.M. Gilbert, *Stereotype Persistence and Change Among College Students*, 46 *J. ABNORMAL & SOC. PSYCHOL.* 254 (1951).

339. Marvin Karlins et al., *On the Fading of Social Stereotypes: Studies in Three Generations of College Students*, 13 *J. PERS. & Soc. Psychol.* 1 (1969).

340. *Id.* at 2, 5-8; *see also* Gilbert, *supra* note 338, at 246-52.

341. Karlins et al., *supra* note 339, at 2, 5-8; *see also* Gilbert, *supra* note 338, at 246-52.

342. Katz & Braly, *supra* note 334.

343. *See* HINTON, *supra* note 332, at 11.

344. *Id.*

345. John C. Brigham, *Ethnic Stereotypes*, 76 *PSYCHOL. BULL.* 15, 30 (1971). *See* HINTON, *supra* note 332, at 11.

346. *Id.* at 14-19.

At least a modicum of will, ill will – animus – in the case of derogatory stereotypes, toward the subject of derision need be present in the mind of the subject.<sup>347</sup>

Social cognition theory, on the other hand, maintains that as products of their environment and culture, human beings make decisions filtered through a cognitive lens.<sup>348</sup> This lens, which everyone acquires at birth and evolves until death, inheres in the human instinct to group objects according to sameness.<sup>349</sup> Early experiments by prominent psychologists revealed that humans tended to exaggerate differences among identical objects when those objects were placed into different groups.<sup>350</sup> Moreover, they tended to overstate similarities among those same objects when placed into the same group.<sup>351</sup> From these experiments, it was concluded that subjects tended to stereotype objects according to group membership, a phenomenon Tajfel and Wilkes labeled “groupness.”<sup>352</sup>

Motivational theory, as it attempted to explain bias, prejudice, and discrimination, treated groupness as aberrational in that it tended to focus upon the anti-social aspects of the phenomenon of interest, such as stereotyping.<sup>353</sup> According to social cognition, intent is irrelevant.<sup>354</sup> A major premise of social cognition is that stereotyping is not an aberrant form of behavior arising out of hostility or ill will, but rational, normal behavior “no different from other categorization-related constructs.”<sup>355</sup>

As a means of information processing, the human need to categorize is the byproduct of an instinct to avoid sensory overload.<sup>356</sup> Humans group objects, ideas, facts, and people into categories that cause decisions to flow easier and faster than if they attempted to analyze them on an *ad hoc* basis.<sup>357</sup> Thus, humans resort to construct heuristics, or mental shortcuts, in making decisions.<sup>358</sup> They tend to categorize people according to groups with which they personally identify.<sup>359</sup> People who most closely

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347. *Id.* at 11.

348. Linda Hamilton Krieger, *The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity*, 47 STAN. L. REV. 1161, 1186-87 (1995).

349. See HINTON, *supra* note 332, at 106.

350. *Id.* at 111-12.

351. *Id.* at 112.

352. Henri Tajfel & A.L. Wilkes, *Cognitive Aspects of Prejudice*, 25 J. SOC. ISSUES 79, 83-86 (1969), *construed in* Krieger, *supra* note 348, at 1186-87.

353. Krieger, *supra* note 348, at 1186-88.

354. *Id.* at 1188.

355. *Id.* at 1186-87.

356. See HINTON, *supra* note 332, at 32.

357. *Id.* at 31-35.

358. *Id.*

359. Krieger, *supra* note 348, at 1188-89.

resemble a particular group tend to identify with that group and its constituents; whereas members who do not fit into that particular group must be members of some out-group.<sup>360</sup> The result is an in-group/out-group dichotomy, which in a social milieu can be problematic because it results in an us against them mentality.<sup>361</sup> Even more problematic is that humans tend to invest scarce time and resources, physical, mental and emotional, in distinguishing between particular traits and characteristics among their own in-group members, while declining to invest similar scarce resources to distinguish among members of out-groups.<sup>362</sup> The implication is that according to members of the in-group, their own members may vary among one another, whereas members of the out-group are perceived as all being alike, something psychologists call homogeneity.<sup>363</sup>

Stereotyping operates in a manner similar to groupness, in that objects or people in the same group are perceived as being more homogenous than if they belonged to different groups, or than if they were viewed in the aggregate population-at-large.<sup>364</sup> Such was the lesson of the lines of Tajfel and Wilkes.<sup>365</sup> Subjects presented with lines each varying by a consistent five percent ratio, identified the lines belonging to the same group as having less variation than similar lines separated by groups.<sup>366</sup> Although the lines were the exact same length, when they were placed into separate groups, subjects tended to find more similarity among the lines within groups than between them.<sup>367</sup>

A natural progression from stereotyping is the formation of mental prototypes, something cognitive psychologists label "schemas."<sup>368</sup> Schemas are an amalgamation into a simple snapshot of perceptions, or discrete frames, of reality.<sup>369</sup> Before incoming information can become focused in the human mind, it first passes through a schematic lens.<sup>370</sup> This lens causes the information to become focused quickly and sharply.<sup>371</sup> The price of this efficiency is bias in the perception of incom-

360. *Id.* at 1189-90.

361. *Id.* at 1192.

362. *Id.* at 1193.

363. *Id.* at 1192.

364. Krieger, *supra* note 348, at 1198.

365. Henri Tajfel & A.L. Wilkes, *Classification and Quantitative Judgment*, 54 *BRIT. J. PSYCHOL.* 101 (1963), *construed in* HINTON, *supra* note 332, at 111.

366. *Id.*

367. *Id.*

368. Krieger, *supra* note 348, at 1188, 1999.

369. *Id.*

370. *Id.* at 1202.

371. *Id.* at 1190.



ing information, since the lens is not clear, but clouded.<sup>372</sup> Cloudiness results in fogging powers of reason, thereby biasing "judgment long before the 'moment of decision.'"<sup>373</sup>

Schemas that have evolved through a stereotypical lens exhibit a high mental correlation with certain traits associated with different groups of people.<sup>374</sup> When these traits reflect perceived notions of reality, although they are not objectively correct, they are said to be "illusory," giving rise to the shibboleth "illusory correlation."<sup>375</sup> According to Hamilton, illusory correlations harbor ominous implications for racial minority groups.<sup>376</sup> When racial majority members experience little contact with minority members, and they observe a single minority member in some memorable act, they may infer a correlation between that act and all members of the minority group.<sup>377</sup> For racial profiling purposes, one criminal act committed by a single minority member may result in attribution of criminality to the entire minority group in the mind of the majority group member, even though concededly (and statistically) a majority group member is just as likely to commit the same criminal act. By unconsciously constructing prior mental expectations of how human beings perceive reality, stereotypes, schemas, and person prototypes bias powers of clear, intelligent reasoning.<sup>378</sup>

A corollary of this theory is that humans tend to attribute success and highly desirable achievements to internal dispositional causes among members of their own particular in-group.<sup>379</sup> Success is achieved because in-group members are intelligent, motivated, ambitious, and hard working.<sup>380</sup> For members of the out-group, however, success is due to external causes and environmental factors, in the minds of in-group members.<sup>381</sup> When an out-group member achieves something equally laudable as an in-group member, it is due to some externality – public assistance, affirmative action, or outside help.<sup>382</sup> So powerful and prolific is this attribu-

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372. *Id.*

373. Krieger, *supra* note 348, at 1188.

374. *Id.* at 1195.

375. *Id.*

376. D.L. Hamilton, *A Cognitive Attributional Analysis of Stereotyping*, in 12 *ADVANCES EXPERIMENTAL SOC. PSYCHOL.*, (L. Berkowitz ed., 1979), *construed in* HINTON, *supra* note 332, at 111 (2000).

377. *See* HINTON, *supra* note 332, at 65-66.

378. *Id.* at 66.

379. Krieger, *supra* note 348, at 1207.

380. *Id.* at 1206.

381. *Id.* at 1207.

382. *Id.* at 1204.

tion bias that it has become known as the "fundamental attribution error."<sup>383</sup>

Person prototypes, stereotypes, and schemas become particularly pronounced in the presence of what psychologists call salience.<sup>384</sup> Attention becomes focused upon the unusual instead of the common.<sup>385</sup> Distinctiveness becomes tantamount to salience.<sup>386</sup> In a social setting, the result may be that racial minority members become salient, or more carefully observed, among racial majority members.<sup>387</sup> Thus, meaning is given to the old adage about being the only grain of salt in the pepper shaker, or vice versa.

At this stage, prototypes, stereotypes, and schemas all coalesce into the human memory of events.<sup>388</sup> Human subjects have found it easier to remember behavior which conformed to prior expectations than which disconfirmed, or were unrelated to them.<sup>389</sup> But memories are hardly inscribed upon a blank slate. First they must pass through the lens of perception, as that lens has been shaped and clouded by prototypes, stereotypes, and schemas – in other words, social biases.<sup>390</sup> Recollection of events is at least to some degree affected by bias; so information stored in memory is also biased.<sup>391</sup>

Social cognition theory is illustrated in a parable Krieger<sup>392</sup> relates about a Salvadoran client of hers suing for employment discrimination.<sup>393</sup> Krieger had been deposing the plant foreman in an attempt to determine his motivation for treating her client differently and adversely from racial majority employees.<sup>394</sup> Growing agitated over the ordeal, the foreman spontaneously remarked that that the employee being a "Mexican" never even entered his mind.<sup>395</sup> Although at first taken aback, Krieger later experienced an epiphany that something salient must have existed in the mind of the foreman by virtue of the fact that he referred to her Salvado-

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383. *Id.* at 1204-05.

384. Krieger, *supra* note 348, at 1193.

385. *Id.* at 1194.

386. *Id.*

387. *Id.* at 1193.

388. *Id.* at 1194.

389. Linda Hamilton Krieger, *The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity*, 47 STAN. L. REV. 1161, 1207 (1995).

390. *Id.* at 1202.

391. *Id.*

392. *Id.* at 1162-64.

393. *Id.*

394. Krieger, *supra* note 348, at 1163.

395. *Id.* at 1164.

ran client as a "Mexican."<sup>396</sup> By his thinking that all Hispanics were alike (homogeneity) the foreman was living proof of person prototypes, stereotypes, schemas, salience, and memory confirming experiences.<sup>397</sup> The upshot is none of such behavior is aberrational; indeed it is normal, so neither motivation nor awareness need enter into the racial profiling equation.<sup>398</sup>

Other prominent authors on the subject of race cite stereotyping as a human survival mechanism.<sup>399</sup> As infants, according to Loury,<sup>400</sup> humans learn to recognize patterns, then associate them with evolving expectations of reality.<sup>401</sup> Early elementary examples include identification and love of parents and friends, fear of strangers, acquisition of language skills, and of course, color recognition.<sup>402</sup> The latter presupposes arbitrariness. "What could be more arbitrary than the coordinating convention, stop on 'red' and go on 'green'? . . . The particular colors being used here can have no intrinsic significance."<sup>403</sup> Yet, over time, even colors acquire salience, however arbitrary that salience may be.<sup>404</sup> Red is prohibited; green is permitted. At some point, that which is green is good; red is bad.<sup>405</sup>

Loury asks why racial stereotypes exist, and explores the consequences of their existence as they affect African-Americans.<sup>406</sup> As a matter of survival, humans have an instinct to classify.<sup>407</sup> Classification extends not just to objects, but also to other humans.<sup>408</sup> The process begins as early as birth, when babies learn to recognize differences according to sensate perception between things such as love and hate, safety and danger, hot and cold, and colors.<sup>409</sup> As they appear in, on, or part of, anything physical, Loury calls these differences "markers."<sup>410</sup> Marker identification is crucial to human development and survival, since it would be impractical, and in all probability, fatal, for people to reason logically through every

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396. *Id.*

397. *Id.*

398. *Id.*

399. See, e.g., LOURY, *supra* note 9, 17-54.

400. See LOURY, *supra* note 9.

401. *Id.* at 65-67.

402. *Id.* at 66.

403. *Id.*

404. *Id.*

405. See LOURY, *supra* note 9, at 66.

406. *Id.* at 67.

407. *Id.*

408. *Id.* at 67-68.

409. *Id.* at 66.

410. GLENN C. LOURY, *THE ANATOMY OF RACIAL INEQUALITY* 65, 67 (2002).

situation on a case by case basis.<sup>411</sup> They must be able instantly to generalize from recognition of specific traits to resultant outcomes.<sup>412</sup> As humans develop, they acquire this ability instantly to generalize based upon identification of specific markers.<sup>413</sup> This ability, in turn, becomes automatic and subconscious.

"Aversive racism" is a term used by Dovidio and Gaertner<sup>414</sup> to describe subconscious racism.<sup>415</sup> In their words, "many people who consciously and sincerely support egalitarian principles and believe themselves to be nonprejudiced also unconsciously harbor negative feelings and beliefs about Blacks."<sup>416</sup> Feelings like these typically are characterized by "avoidance" rather than overt hostility, and are better described as biases than outward hatred.<sup>417</sup>

Cognition clouded by bias may be the result of normal human development.<sup>418</sup> People ascribe significance to commonplace symbols like colors, which in and of themselves have no intrinsic significance.<sup>419</sup> This tendency is not inherently aberrant or socially reprehensible.<sup>420</sup> For without a tendency to generalize meaning from symbols, human beings would be unable to function throughout life.<sup>421</sup> As temporal creatures, humans simply lack the time and luxury of being able consciously to analyze every word, object, or symbol that confronts them in life's daily routines.<sup>422</sup> Mental paralysis and ultimately sheer mental chaos would result.<sup>423</sup> The ability to generalize is part of the ability to survive as individuals and as a species.<sup>424</sup> It is pernicious generalizations, which Schauer describes as lacking statistical or factual foundation, which ultimately lead to inimical, as opposed to benign, stereotyping.<sup>425</sup> Racial stereotyping is an example.<sup>426</sup>

411. *Id.* at 65-67.

412. *Id.* at 27.

413. *Id.* at 27-29.

414. John F. Dovidio & Samuel L. Gaertner, *Affirmative Action, Unintentional Racial Biases, and Intergroup Relations*, 52 J. SOC. ISSUES 51 (1996).

415. *Id.* at 53.

416. *Id.*

417. *Id.* at 53-54.

418. Krieger, *supra* note 348, at 1200.

419. See LOURY, *supra* note 9, at 66.

420. See HINTON, *supra* note 332, at 32.

421. *Id.*

422. *Id.* at 31-35.

423. *Id.* at 32.

424. For a discussion of the positive aspects of generalization, see FREDERICK SCHAUER, *PROFILES, PROBABILITIES, AND STEREOTYPES* 288-98 (2003).

425. See SCHAUER, *supra* note 43, at 7.

426. *Id.* at 22.

Commonality of stereotypes is their banality. Blacks are indolent. Jews are niggardly. Hispanics are unctuous. Asians are mendacious. People with physical or mental disabilities are unreliable workers, and, of course, is the ubiquitous blondes are dumb (but have more fun). A stereotype for everyone and for everyone a stereotype seems to be axiomatic. The point is, although stereotypes make life easier, they can be dangerous if one comes to rely too much upon them. They often attain a life of their own, replicating themselves in what Loury calls "self-confirming stereotypes."<sup>427</sup> "Observers, by acting upon the generalization, set in motion a sequence of events that has the effect of reinforcing their initial judgment."<sup>428</sup> It is from this propensity to draw in the observer, and others associated with the observer, that springs the ultimate metamorphosis of stereotyping – embeddedness.<sup>429</sup>

It is in this last stage of development that stereotypes become embedded in culture.<sup>430</sup> Every culture has its own peculiar stereotypes, and it might be safe to say that so too do businesses, occupations, and professions, which are but a microcosm of the prevailing culture. Law enforcement is a microcosm. At least, anecdotal evidence exists: "Columbia-based traffickers continued to control wholesale level cocaine distribution throughout the heavily populated northeastern United States. . . often employing Dominican criminals as subordinates. . . . In major U.S. cities, organized criminal groups of Cuban, Jamaican, and Mexican nationals, as well as African-American and ethnic Dominican gangs, dominated the retail market."<sup>431</sup>

Negative stereotypes not only reinforce negativity in the mind of the observer, but also in the mind of the victim.<sup>432</sup> "In this sense, negative stereotypes constitute a 'self-fulfilling prophecy.'"<sup>433</sup> Steele and Aronson labeled this stereotypical life cycle the "stereotype threat."<sup>434</sup> In their terms, it is a "self-evaluative" threat, in that given sufficient social prevalence of the stereotype, the victim himself begins to act in conformance

427. See LOURY, *supra* note 9, at 23-29.

428. *Id.* at 23.

429. Loury approaches the subject of self-confirming stereotypes with the perspective of an economist. He describes the final outcome of such stereotypes as a "resulting convention" (or "equilibrium" to put it in starkly economic terms). See *id.* at 23-29.

430. *Id.* at 28.

431. NAT'L NARCOTICS INTELLIGENCE CONSUMERS COMM., THE NNICC REPORT 1997: THE SUPPLY OF ILLICIT DRUGS TO THE UNITED STATES 11-12 (1998) *quoted in* Gross & Barnes, *supra* note 326, at 653.

432. See Stephen Coate & Glenn C. Loury, *Will Affirmative-Action Policies Eliminate Negative Stereotypes?*, 83 AM. ECON. REV. 1220 (1993).

433. *Id.* at 1221.

434. Claude M. Steele & Joshua Aronson, *Stereotype Threat and the Intellectual Test Performance of African Americans*, 69 J. PERS. & SOC. PSYCHOL. 797, 797 (1995).

with it, as well as actually believe it.<sup>435</sup> When the victim, as well as the observers, accept veracity of a negative stereotype, it creates a self threat “enough to have disruptive effects of its own.”<sup>436</sup>

An example is a study by Coate and Loury building upon earlier work by Gary S. Becker, Kenneth J. Arrow and Edmund Phelps.<sup>437</sup> The authors devised a model to detect existence of employment discrimination in assigning minority workers to lower paying jobs, even though they were being paid equal wages for equal work.<sup>438</sup> To the authors, any analysis of employment discrimination must begin with an investigation of whether the employer may be discriminating by job assignment, rather than wages, in that beneath job assignment may be lurking a more insidious form of discrimination than the relatively obvious nature of disparate wages for similar work.<sup>439</sup> Racial stereotypes may be the main driver behind subordinate job assignment.<sup>440</sup> These stereotypes, in turn, create a cycle among both employers and employees, thereby becoming “self-confirming” stereotypes<sup>441</sup> – the self fulfilling prophecy of which Loury warns.<sup>442</sup> What Coate and Loury concluded was that so-called racial color blindness is not entirely blind.<sup>443</sup> If negative stereotypes reinforce preconceived expectations, then the observers are actually “acting rationally” by discriminating on the basis of color.<sup>444</sup> In the words of Neil DeGrasse Tyson, one of seven African-American astrophysicists out of 4000 in 1991, the stereotype threat constitutes an “emotional tax,” in the form of “intellectual emasculation.”<sup>445</sup>

Given the existence of racial profiling, it is possible that the stereotype threat may serve to create an endless loop. Not only is it the law enforcement community that stereotypes racial minorities, but racial minorities tend to stereotype officers of the law.<sup>446</sup> Harris cites “the talk” (referring

435. *Id.*

436. *Id.*

437. See Coate & Loury, *supra* note 432, at 1222 (Becker developed the discrimination theory based on tastes and Arrow and Phelps explored discrimination based on a statistical theory).

438. *Id.*

439. *Id.*

440. *Id.* at 1224.

441. *Id.* at 1224-26.

442. See LOURY, *supra* note 9, at 23-26.

443. Stephen Coate & Glenn C. Loury, *Will Affirmative-Action Policies Eliminate Negative Stereotypes?*, 83 AM. ECON. REV. 1220, 1227 (1993).

444. *Id.*

445. Neil DeGrasse Tyson, Convocation Address at Columbia University (May 14, 1991), <http://research.amnh.org/users/tyson/speeches/PhDConvocationAddress.html>.

446. David Harris describes this “vicious cycle” in his famous *Driving While Black* report. See HARRIS, *supra* note 104, at 5. Further evidence of the cycle can be found in a study conducted by Lundman and Kaufman, in which the researchers found that African-

to the discussions that African-American parents often have with their children about what to do when they are detained by law enforcement) and how the subject came up during the debates surrounding the Conyers racial profiling bill.<sup>447</sup> The Justice Department convened a summit in December 1998 to address race and traffic stops.<sup>448</sup> Among the speakers was Saul Green, an African-American, who happened to be the United States Attorney for the Eastern District of Michigan.<sup>449</sup> Although a high level law enforcement official himself, Green felt uncomfortable among his peers, as he related the time he cautioned his son about driving while black.<sup>450</sup> Obey all traffic laws, but if you are stopped by an officer you are subject to racial profiling, even in Detroit, which has a large African-American population.<sup>451</sup>

If stereotypes are so prolific, and make life simpler, then what is so objectionable about them? Nothing in general; but for racial profiling specifically, the objection is to using race *qua* race as the basis for making cognitive decisions.<sup>452</sup> Loury's definition of race provides some insight into the subject of racial profiling:

[b]y the term "race". . . I use that term to refer to a cluster of inheritable bodily markings carried by a largely endogamous group of individuals, markings that can be observed by others with ease, that can be changed or misrepresented only with great difficulty, and that have come to be invested in a particular society at a given historical moment with social meaning.<sup>453</sup>

It is in the latter part of that definition – social significance – wherein lies the danger of racial stereotyping.<sup>454</sup> Members of the human species exhibit different ethnic characteristics, markers in the terminology of Loury.<sup>455</sup> What is unusual, however, is that over time these markers ac-

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Americans and Hispanics were far more likely than whites to self-report that law enforcement officers acted improperly during the execution of a traffic stop. See Lundman & Kaufman, *supra* note 102, at 207.

447. See LOURY, *supra* note 9, at 107-15.

448. *Id.* at 107-08.

449. *Id.* at 108.

450. *Id.* at 108-09.

451. *Id.* at 109.

452. Many voices raise this objection, and call for the elimination of racial profiling including most prominent law enforcement agencies. See, e.g., U.S. DEP'T OF JUSTICE, FACT SHEET: RACIAL PROFILING 1 (2003), available at [http://www.tsa.gov/interweb/asset\\_library/DOJ\\_racial\\_profiling.pdf](http://www.tsa.gov/interweb/asset_library/DOJ_racial_profiling.pdf); TEX. DEP'T OF PUB. SAFETY, *supra* note 253, at 3 (2000), available at [http://www.txdps.state.tx.us/director\\_staff/public\\_information/trafrep2q00.pdf](http://www.txdps.state.tx.us/director_staff/public_information/trafrep2q00.pdf).

453. See LOURY, *supra* note 9, at 20-21 (emphasis added).

454. *Id.* at 21-23.

455. *Id.* at 20-21.

crue "something of import within [a]n historical context."<sup>456</sup> Culture also plays a significant role.<sup>457</sup> Skin color may be innate and indelible, but race "is all about embodied social signification."<sup>458</sup> Based upon these congenital markers, people tend subconsciously to attribute to others extrinsic character traits, both positive and negative.<sup>459</sup> From this tendency to stereotype by congenital characteristics may emerge the phenomenon known as racial profiling.

How this applies to the legal dialectic may be illustrated by discrimination law. Two legal theories underlying any type of discrimination law, be it in employment, credit, education, or racial profiling, are disparate treatment and disparate impact.<sup>460</sup> Disparate treatment requires animus (motivation) harbored against an individual or group; it is incumbent upon the charging party to prove that they were treated differently from the rest of the group, based upon some legally prohibited characteristic.<sup>461</sup> Disparate impact carries no such burden.<sup>462</sup> It is sufficient to prove that a "facially neutral. . . practice has a significantly discriminatory impact."<sup>463</sup> Motivation is irrelevant.<sup>464</sup> Both disparate treatment and disparate impact must be proven in racial profiling cases.<sup>465</sup>

By analogy, the landmark decision on the issue of which theory applies to charges of racial discrimination is *Washington v. Davis*,<sup>466</sup> a class action by African-American police officers against the District of Columbia Police Department.<sup>467</sup> The officers alleged that the Department had been administering a racially discriminatory literacy test as a condition prece-

456. *Id.* at 21.

457. *Id.*

458. See LOURY, *supra* note 9, at 21.

459. *Id.* at 22.

460. The differences between these two principles were first described by the United States Supreme Court in the landmark case *Griggs v. Duke Power Co.* See *Griggs v. Duke Power Co.*, 401 U.S. 424, 430-31 (1971).

461. *St. Mary's Honor Ctr. v. Hicks*, 509 U.S. 502, 516-17 (1993) ("[The Plaintiff has] the ultimate burden of persuading the court that she has been the victim of intentional discrimination." (quoting *Tex. Dep't of Cmty. Affairs v. Burdine*, 450 U.S. 248, 256 (1981))).

462. *Griggs*, 401 U.S. at 432 ("[G]ood intent or absence of discriminatory intent does not redeem employment procedures or testing mechanisms that operate as 'built-in headwinds' for minority groups and are unrelated to measuring job capability.").

463. *Connecticut v. Teal*, 457 U.S. 440, 446 (1982) (citing *Griggs*, 401 U.S. at 432).

464. *Griggs*, 401 U.S. at 432.

465. See *United States v. Bell*, 86 F.3d 820, 823 (8th Cir. 1996); *United States v. Duque-Nava*, 315 F. Supp. 2d 1144, 1160-61 (D. Kan. 2004); *United States v. Hare*, 308 F. Supp. 2d 955, 963 (D. Neb. 2004); *Jones v. Sterling*, 110 P.3d 1271, 1274 (Ariz. 2005); *People v. Valencia-Alvarez*, 101 P.3d 1112, 1116 (Colo. Ct. App. 2004).

466. *Washington v. Davis*, 426 U.S. 229 (1976).

467. *Id.*



dent for admission into its academy.<sup>468</sup> Cross motions for summary judgment were filed, plaintiffs advancing both statutory and Fifth Amendment due process grounds for judgment.<sup>469</sup> The District Court granted summary judgment for the defendant on the ground that under the due process argument, there was “no claim of ‘an intentional discrimination or purposeful discriminatory acts’ but only a claim that [the test] bore no relationship to job performance and ‘has a highly discriminatory impact in screening out black candidates.’”<sup>470</sup> The Court of Appeals took a diametrically opposite view, adopting the statutory scheme of Title VII permitting a showing of disparate impact, finding the literacy test invidiously discriminated against African-Americans.<sup>471</sup> By doing this, the Court of Appeals effectively incorporated disparate impact theory into the implied equal protection component of the Fifth Amendment.<sup>472</sup> The Court of Appeals reversed the District Court, holding that it was guided by the Supreme Court ruling in *Griggs v. Duke Power Co.*,<sup>473</sup> that disparate impact was all that was necessary, and discriminatory intent was irrelevant to establish a violation under the Fifth Amendment.<sup>474</sup> The Supreme Court reversed the Court of Appeals, taking the opportunity to clarify the onus required under constitutional allegations of unconstitutional discrimination.<sup>475</sup> Disparate impact, absent intent, is a standard of proof under Title VII of the 1964 Civil Rights Act, but not the ultimate standard for alleged constitutional violations under the Fifth and Fourteenth Amendments.<sup>476</sup> Opined the Court:

As the Court of Appeals understood Title VII, employees or applicants proceeding under it need not concern themselves with the employer’s possibly discriminatory purpose but instead may focus solely on the racially differential impact of the challenged hiring or promotion practices. This is not the constitutional rule. We have never held that the constitutional standard for adjudicating claims of invidious racial discrimination is identical to the standards applicable under Title VII, and we decline to do so today.<sup>477</sup>

Under Title VII, the courts have carved out a narrow statutory exception to the prevailing rule that intent to discriminate must be proven for

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468. *Id.* at 232-36.

469. *Id.* at 233-34.

470. *Id.* at 235.

471. *Davis*, 426 U.S. at 236-37.

472. *Id.* at 237.

473. *Griggs v. Duke Power Co.*, 401 U.S. 424 (1971).

474. *Davis*, 426 U.S. at 236.

475. *Id.* at 238.

476. *Id.* at 238-39.

477. *Id.* at 238-39.

allegations arising under the Fifth and Fourteenth Amendments.<sup>478</sup> Reliance upon either or both of those amendments still requires proof of animus.<sup>479</sup> In a practical sense, what this means for the conflict between motivational and social cognition theories of discrimination is that motivational theory prevails.<sup>480</sup> A *prima facie* case of disparate impact, as important as it is to get one's foot in the courtroom door, is itself insufficient to prevail, absent proof of a motivation.<sup>481</sup> It is necessary to prove causation.<sup>482</sup>

How does one go about proving intent? First, solace may be taken in Justice John Paul Stevens' concurrence in *Washington v. Davis*:

[T]he line between discriminatory purpose and discriminatory intent is not nearly as bright, and perhaps not quite as critical, as the reader of the Court's opinion might assume. . . . Therefore, although I accept the statement of the general rule in the Court's opinion, I am not yet prepared to indicate how that standard should be applied in the many cases which have formulated the governing standard in different language.<sup>483</sup>

Second, unless one is prepared to concede irrefutability to social cognition theory, acceptance of which by definition nullifies motivation, at least at a conscious level, it stands to reason that in racial profiling cases, intent may be proven as in any other case requiring animus.<sup>484</sup> Motivational theory is not dead simply because an alternative exists. Show of intent in criminal cases is instructive. Even a defendant refusing to testify in accordance with her Fifth Amendment right against self-incrimination is still susceptible to conviction by way of circumstantial evidence of intent.<sup>485</sup> Exceptions to the hearsay rule including admissions by party op-

478. *Griggs*, 401 U.S. at 432.

479. *Davis*, 426 U.S. at 239.

480. *But cf.* Krieger, *supra* note 348, at 1211 ("The assumptions underlying Title VII's disparate treatment theory have been so substantially undermined by social cognition theory that they can no longer be considered valid.").

481. *Jefferson v. Hackney*, 406 U.S. 535, 548-49 (1972) (stating that a statistically disproportionate impact by the Social Security Act is insufficient without a showing of intent to discriminate).

482. *Watson*, 487 U.S. at 994.

483. *Davis*, 426 U.S. at 254 (Stevens, J., concurring).

484. Indeed, selective enforcement claims always require proof of both discriminatory impact and discriminatory intent. *See* *United States v. Bell*, 86 F.3d 820, 823 (8th Cir. 1996); *United States v. Duque-Nava*, 315 F. Supp. 2d 1144, 1160-61 (D. Kan. 2004); *United States v. Hare*, 308 F. Supp. 2d 955, 963 (D. Neb. 2004); *Jones v. Sterling*, 110 P.3d 1271, 1274 (Ariz. 2005); *People v. Valencia-Alvarez*, 101 P.3d 1112, 1116 (Colo. Ct. App. 2004).

485. *South Dakota v. Neville*, 459 U.S. 553, 563-64 (1983) (holding that the admission into evidence of circumstantial blood-alcohol test results does not violate a criminal defendant's right against self-incrimination).

ponents, statements against interest, and excited utterances are all admissible into evidence, and tend to prove intent, in civil suits by a preponderance of evidence, in criminal cases beyond a reasonable doubt.<sup>486</sup>

Observed Gross and Barnes, "Racial profiling is impossible to detect or prove without detailed information on police conduct; whom they stop, question, and search, by race; why they take these actions; and what they discover in the process."<sup>487</sup> "The essential step," they argue, is that data be collected and retained "in the first place."<sup>488</sup> This Texas already has mandated by statute.<sup>489</sup> The data exists. Use of the data is the crux of the matter. Borrowing again from employment discrimination law, a *prima facie* case based upon a statistical showing of disparate impact by race opens the courthouse door.<sup>490</sup> The burden then shifts to the opposing side to show either lack of intent or some racially benign motivation for disparate treatment.<sup>491</sup> Upon such showing, the burden then reverts to the proponent to show the benign reason is a pretext or sham for discrimination.<sup>492</sup> At this point, the finder of fact takes over, deliberates, then decides.

#### IV. DATA

*The government are very keen on amassing statistics - they collect them, add them, raise them to the nth power, take the cube root and prepare wonderful diagrams. But you must never forget that every one of those figures comes in the first instance from the chowty dar (village watchman), who just puts down what he damn pleases.*

Sir Josiah Stamp (Assistant Secretary of Great Britain's Inland Revenue Department 1916-1919)<sup>493</sup>

Under examination is the Texas Department of Public Safety Highway Patrol.

The Highway Patrol Service is charged with the responsibility of enforcing traffic and criminal laws, investigation of motor vehicle traffic accidents, and providing a visible police presence in order to deter violators along more than 223,000 miles of rural highways across the state. The

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486. See FED. R. EVID. 804(b)(3); FED. R. EVID. 803(2); FED. R. EVID. 801(d)(2).

487. Gross & Barnes, *supra* note 326, at 656.

488. *Id.*

489. TEX. CODE CRIM. PROC. ANN. art. 2.132(b)(6) (Vernon Supp. 2005).

490. See *Washington v. Davis*, 426 U.S. 229, 241 (1976).

491. *Id.*

492. *Price Waterhouse v. Hopkins*, 490 U.S. 228, 242-44 (1989).

493. SIR JOSIAH STAMP, *SOME ECONOMIC FACTORS IN MODERN LIFE* 258-59 (1929), quoted in Bartleby.com, Respectfully Quoted: A Dictionary of Quotations, <http://www.bartleby.com/73/1768.html> (last visited Mar. 3, 2006).

Highway Patrol Service currently has an authorized strength of 2091 officers, including supervisors, and is spread across eighteen highway patrol districts statewide.<sup>494</sup>

The fact that the Highway Patrol is primarily responsible for a presence along rural Texas highways, as distinguished from urban byways, may inject a degree of downward bias into the data, if it can be surmised that minority drivers, especially Blacks, maintain a greater presence in urban, rather than rural, areas.<sup>495</sup> If their numbers are not as great as Whites on rural roads, then minority drivers who get stopped by the Highway Patrol may suffer from salience. A salient racial minority may be subject to more vetting than their non-salient White counterparts. This seems logical.

Data were obtained from the Texas Department of Public Safety under the Texas Open Records Act.<sup>496</sup> The entire dataset consists of 5,209,998 citations and warnings (hereinafter called "observations") issued by the Texas Department of Public Safety for calendar years 2000 (1,026,588 citations), 2001 (1,031,598 citations), 2002 (988,967 citations), and 2003 (1,094,401 citations and 1,066,493 warnings). With the sole exception of some redacted citizen identifiers (names and driver's license numbers), the data are raw, rather than grouped, blocked or aggregated. There are forty-seven fields, or variables within each observation. With the exception of "alleged speed," "arrest date," "year," and "date of birth," which are continuous variables, the remaining variables are either categorical or nominal. Many variables are dichotomous. For each year's dataset the forty-seven variables within each observation are:

- 1) Arrest key
- 2) Arrest date
- 3) Year
- 4) Month
- 5) Date of birth (DOB)
- 6) Ticket type
- 7) Commercial driver's license (binary)
- 8) Commercial vehicle (binary)

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494. TEX. DEP'T OF PUB. SAFETY, AGENCY STRATEGIC PLAN: FISCAL YEARS 2005-2009 33 (2004), available at <http://www.txdps.state.tx.us/oai> (follow "Strategic Outlook" hyperlink).

495. Texas Department of Public Safety, Department of Public Safety's Organizational Structure, <http://www.txdps.state.tx.us/overview/> (last visited Mar. 6, 2006) ("The Texas Highway Patrol (THP) Division is responsible for general police traffic supervision and traffic and criminal law enforcement on the rural highways of Texas.").

496. Steven R. Wolfson, Racial Profiling in Texas Department of Public Safety Motor Vehicle Searches: Race Aware or Race Benign, 2000-2003 (2005) (on file with *The Scholar*); see also TEX. GOV'T CODE ANN. §§ 552.001-552.002 (Vernon 2004).

- 9) County (numbered 1 to 254 for each of the 254 Texas counties)
- 10) Court
- 11) Day
- 12) Driver's license by state
- 13) Hazmat (binary)
- 14) Interstate (binary)
- 15) Intrastate (binary)
- 16) Milepost
- 17) Service (DPS division)
- 18) Region
- 19) District (DPS)
- 20) Sergeant area
- 21) Officer ID (by badge number)
- 22) Precinct
- 23) Quarter of day
- 24) Race and sex (aggregated)
- 25) Road class
- 26) Route
- 27) Ticket number
- 28) License plate
- 29) License plate by state
- 30) Vehicle type
- 31) Accident (binary)
- 32) Alleged speed
- 33) Speed limit
- 34) Construction zone (binary)
- 35) Workers present (binary)
- 36) Warning issued (binary)
- 37) Citation issued (binary)
- 38) Search (binary, whether one was conducted or not)
- 39) Probable cause (binary, whether any was extant)
- 40) Consent for search (binary, whether any was extant)
- 41) Search incident to arrest (binary)
- 42) Vehicle inventory (binary)
- 43) Contraband found (binary)
- 44) Drugs found (binary)
- 45) Weapon found (binary)
- 46) Currency found (binary)
- 47) Other contraband found (binary).

To get an intuitive feel for the data, a number of diagnostic tests first were performed. For the race and sex variable in 2000, 436 dubious observations were discovered. Although 436 observations out of 1,026,588 total is infinitesimal, the 436 observations were inspected to assure that

no endemic contamination was extant. It was concluded that these errors were the result of data entry error by DPS technicians, so they were dropped. The next three years proved to be considerably cleaner than year 2000 for race/sex, in that only one questionable observation out of 1,031,598 was found in 2001; and none were found in 2002, thereby obviating the need for dropping any observations in those years. The 2003 data were the cleanest and best managed as received from the DPS, with no dubious observations detected.

The race and sex variable was parsed, then quantified as binary variables each for male and female, and for each racial group. There are six racial groups: Asian, Black, Hispanic, Indian (Native American), White, and Unknown. To isolate drivers with Texas driver's licenses from those with out-of-state licenses, binary variables were generated, so that any driver's license from a state other than Texas was equal to one, and a Texas license was equal to zero. From the date of birth variable, a new variable called "age" was created, which was a continuous variable from the driver's date of birth to the date a citation was issued (for warnings where no citation was issued, the dataset contains no date of birth, so the "age" variable could not be generated for warnings); and from birth date, a binary variable equal to one was generated for drivers under thirty years of age. Interaction terms for racial groups driving with out-of state driver's licenses were generated. Other interactions that seemed useful – Black/Hispanic under thirty years old, male under thirty years old, and Black/Hispanic male – were generated.

Driver population data were obtained from the United States Census Bureau for the year 2000, the most recent census, specifically Summary File 3 (SF3), Texas, PCT55, Means of Transportation to Work for Workers 16 Years and Over.<sup>497</sup> As explained below, these data served as a proxy variable for number of miles driven by race traveling on Texas highways.

The dependent (effect) variable for all regressions was "search" or "contraband." The dependent variables are binary – one for existence of a search or contraband given a search, zero for nonexistence. Independent (cause) variables are a column vector of variables, such as race (Black, White, or Hispanic) and any other variables that logically seem to have a causal effect upon the occurrence of a search or contraband.

In any serious study of racial profiling, it is first necessary to establish a benchmark against which to judge disparate impact upon a group. Grog-

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497. U.S. CENSUS BUREAU, CENSUS 2000, SUMMARY FILE 3, <http://www.census.gov/Press-Release/www/2002/sumfile3.html> (last visited Mar. 11, 2006).

ger and Ridgeway<sup>498</sup> cite this as a “key empirical problem.”<sup>499</sup> Benchmarks used in this study are as follows:

- (1) for traffic stops – Texas population-at-large and population of drivers in Texas, derived from the United States Census Bureau, 2000 Census, Summary Files (SF) 3, Table P7 (Texas Population) and SF4, Table PCT 55 (Texas Drivers);
- (2) for searches – the sample of Whites, Blacks, and Hispanics stopped and searched by DPS, taken from the DPS dataset; and
- (3) for contraband – the sample of Whites, Blacks, and Hispanics on whom contraband was found, given a search, taken from the DPS dataset.

Since the population of Texas drivers consists of all Texas drivers, the DPS data should be considered to be a sample of the entire Texas driving population that is or may be subject to stop and search anytime while driving on Texas highways.

In 2000, out of 1,026,587 total stops on Texas roadways, DPS conducted 36,408 searches. Of those stopped, 70.7 percent were White; 9.56 percent were Black; and 18 percent were Hispanic. The remaining races were Asian, Native American Indian, and Unknown, none of which have been examined for purposes of this study.

Of the 36,408 searches in 2000, 21,103 or 57.96 percent of all searches were of Whites; 5,030 or 13.82 percent of all searches were of Blacks; and 9,873 or 27.12 percent of all searches were of Hispanics. A major discrepancy became evident when it was attempted to determine how many of the 36,408 tabulated aggregate searches in 2000 were the result of consent, probable cause, search incident to arrest, or inventory search. Since these are the only categories of search in the database, indeed the only type of police searches legally permissible, each search must fit into one of these specific categories. Thus, the total number of searches should approximate the total number of searches comprised by each legal category.

But in 2000, breaking down the frequency of searches by each of these separate categories yielded the following frequencies: consent–5; probable cause–3; incident to arrest–2; inventory–5; for a total of 15 searches by legal category, even though the data reflected 36,408 aggregate searches. This difference between 36,408 and 15 means that legal justification in the data for 36,393 searches is inexplicable, although highly significant. The reason for this vast discrepancy is unknown; but it could be surmised that since this was the first year of data collection, the troopers

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498. Grogger & Ridgeway, *supra* note 39.

499. *Id.* at 1.

were not yet sufficiently trained in how to record the data; or maybe they were recording *Terry*-type frisks (pat-downs) as searches, for which there is no corresponding field in the database.<sup>500</sup> Another reason might be technician input error. Whatever the reason, 36,393 searches without legal justification is too significant to ignore. Because this may reflect a major source of bias or contamination within the dataset, it was decided not to emphasize these data for calendar year 2000.

In 2001, there were 1,031,598 stops and 49,309 tabulated aggregate searches. Whites comprised 65.65 percent of total stops; Blacks – 9.44 percent; and Hispanics – 22.94 percent. Whites were searched 28,746 times, or 58.3 percent of the total searches; Blacks were 6417 of the total searches, or 13.01 percent of total searches; and Hispanics were 13,602 searches, or 27.59 percent of total searches. The same discrepancy with the search categories found in 2000 also appeared in 2001. Consent reflects 100 cases; probable cause – 55; incident to arrest – 90; and inventory – 141; for a total of 386 compared to 49,309 tabulated aggregate searches. As in year 2000, in 2001, there are 48,923 searches without recorded legal justification. This is 12,500 more questionable searches than in the previous year. Inevitably, the conclusion is that either the data, or the method of data entry, is unreliable. Since the search data for 2001 are contaminated or biased, it was decided not to emphasize data for that year.

In 2002, there were 988,967 stops, resulting in 72,099 searches. Whites comprised 63.55 percent of all stops; Blacks – 9.66 percent; and Hispanics – 24.77 percent. Whites were 54.36 percent of the total searches; Blacks – 13.07 percent of total searches; and Hispanics – 31.46 percent of total searches. For this year, the reason for search fields approximately coincided with the total number of searches: consent – 26,327; probable cause – 13,434; incident to arrest – 17,014; and inventory – 17,104; for a total of 73,879, compared to the tabulated aggregate searches being 72,099. Accounting for rounding and data entry error, this seems close enough for valid statistical and regression analyses.

For 2003, DPS technicians created two separate files – one for citations, and another for warnings in which no citation was issued. Searches were conducted concomitant with some warnings, even though no citation was issued. Both files were examined separately. Variables of interest in the 2003 warning file are:

#### Search

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500. In the landmark case of *Terry v. Ohio*, the Supreme Court created an exception to the Fourth Amendment's warrant requirement allowing an officer to "pat down" or "stop-and-frisk" a suspect that the officer reasonably believes is engaged in criminal activities. See *Terry v. Ohio*, 392 U.S. 1, 24 (1968).



Contraband  
Black  
White  
Hispanic  
Out of State Black  
Out of State White  
Out of State Hispanic

The date of birth variable was not included, because when a warning, rather than a citation, is issued, no driver age is recorded. Thus, there were no observations for date of birth in the warning file.

For 2003, stops resulting in a citation totaled 1,096,352, resulting in 99,095 searches. Of all stops, Whites comprised 63.85 percent; Blacks – 9.4 percent; and Hispanics – 24.87 percent. The rest of the stops were of Indian, Asian, or Unknown race. Search rates were: 45.97 percent of all searches were of Whites; 9.86 percent of all searches were of Blacks; and 43.41 percent of all searches were of Hispanics; the remainder being Indian, Asian, or Unknown. Total for probable cause searches was 15,518; consent – 28,946; incident to arrest – 17,612; and vehicle inventory – 19,475; for a grand total by discrete category of 81,551, compared to the 99,095 aggregate searches, for a difference of 17,544, or a discrepancy of 5.65 percent of the total. Once again, reasons for the discrepancy are unknown, but it was decided this was close enough to use this file.

In the warning file, there were 1,066,493 stops without a citation being issued. This does not mean, however, that there were no searches. To the contrary, there were many. Of the total stops, Blacks comprised 8.92 percent; Whites comprised 69.32 percent; and Hispanics comprised 20.28 percent. There were 14,595 searches of which Blacks comprised 15.42 percent of total searches, Whites comprised 40.54 percent, and Hispanics comprised 42.70 percent. The frequency of searches by legal category was: consent – 12,865; probable cause – 1,255; incident to arrest – 319; and vehicle inventory – 196; for a total of 14,635, compared to 14,595 by tabulating the total, less than 0.05 percent discrepancy, an extremely close match, and most useful for statistical and regression analyses.

## V. STATISTICAL ANALYSIS

“There are three kinds of lies: lies, damn lies, and statistics.”

Benjamin Disraeli, as given notoriety by Mark Twain<sup>501</sup>

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501. MARK TWAIN, *THE AUTOBIOGRAPHY OF MARK TWAIN* 149 (Charles Neider ed., Harper & Brothers 1959) (1917).

For want of a better definition, statistical profiling is what Knowles, Persico, and Todd would call "statistical" discrimination, meaning that according to the numbers certain racial or ethnic groups suffer a disproportionately higher rate of vetting by law enforcement than their counterparts; but actual animus toward them cannot be proved.<sup>502</sup> Any pattern, if one exists, would be analogous to disparate impact in employment discrimination, where it is the effect rather than the cause which is important.<sup>503</sup> Regardless of the absence of animus, if protected classes are relegated to subservient status, remediation is necessary.<sup>504</sup> Racially benign practices may yet produce disparate impact upon these classes.<sup>505</sup> This differs from disparate treatment where proof of animus is a prerequisite to remedy.<sup>506</sup> Statistical profiling may exist *de facto*, even though racial profiling is prohibited *de jure*. Patterns of statistical profiling, however, can be discerned from the data.

To begin a statistical analysis of racial profiling, it is first necessary to test certain hypotheses about the environment under examination. In an ideal law enforcement environment, but for racial discrimination, all else being equal, one would not expect African-Americans or Hispanics to bear a statistically significant higher stop or search rate than their white counterparts. On average, the rates among races should be approximately equal. If it is hypothesized that racial profiling does not exist, then race *qua* race should not be a statistically significant variable in law enforcement decisions. If Blacks and Hispanics are being stopped and searched more than Whites, then their hit rates should be greater than for Whites. However, if they are being stopped and searched more, but their hit rates are equal to or lower than for Whites, evidence of statistical profiling, or even outright disparate treatment, may exist. These are the hypotheses to be tested. Expressed symbolically in logical sequence, they are:

- (1)  $H_{01} : P_{\text{blacks stopped}} \leq P_{\text{whites stopped}}$  All else being equal, if racial profiling does not exist, then the proportion of Blacks stopped will be less than or equal to the proportion of Whites stopped.
- (2)  $H_{a1} : P_{\text{blacks stopped}} > P_{\text{whites stopped}}$  All else being equal, if racial profiling does exist, then the proportion of Blacks stopped will be greater than the proportion of Whites stopped.

502. Knowles, Persico & Todd, *supra* note 109, at 205.

503. See *Washington v. Davis*, 426 U.S. 229, 238-39 (1976).

504. *Id.* at 239.

505. *Id.* at 238-39.

506. *Id.* at 240-41.

- (3)  $H_{02} : P_{\text{Hispanics stopped}} \leq P_{\text{whites stopped}}$  All else being equal, if racial profiling does not exist, then the proportion of Hispanics stopped will be less than or equal to the proportion of Whites stopped.
- (4)  $H_{a2} : P_{\text{Hispanics stopped}} > P_{\text{whites stopped}}$  All else being equal, if racial profiling does exist, then the proportion of Hispanics stopped will be greater than the proportion of Whites stopped.
- (5)  $H_{03} : P_{\text{blacks searched}} \leq P_{\text{whites searched}}$  All else being equal, if racial profiling does not exist, then the proportion of Blacks searched will be less than or equal to the proportion of Whites searched.
- (6)  $H_{a3} : P_{\text{blacks searched}} > P_{\text{whites searched}}$  All else being equal, if racial profiling does exist, then the proportion of Blacks searched will be greater than the proportion of Whites searched.
- (7)  $H_{04} : P_{\text{Hispanics searched}} \leq P_{\text{whites searched}}$  All else being equal, if racial profiling does not exist, then the proportion of Hispanics searched will be less than or equal to the proportion of Whites searched.
- (8)  $H_{a4} : P_{\text{Hispanics searched}} > P_{\text{whites searched}}$  All else being equal, if racial profiling does exist, then the proportion of Hispanics searched will be greater than the proportion of Whites searched.
- (9)  $H_{05} : P_{\text{contraband on blacks}} \geq P_{\text{contraband on whites}}$  All else being equal, if racial profiling does not exist, then given a search, the proportion of finding contraband on Blacks will be greater than or equal to the proportion of finding contraband on Whites.
- (10)  $H_{a5} : P_{\text{contraband on blacks}} < P_{\text{contraband on whites}}$  All else being equal, if racial profiling does exist, then given a search, the proportion of finding contraband on Blacks will be less than the proportion of finding contraband on Whites.
- (11)  $H_{06} : P_{\text{contraband on Hispanics}} \geq P_{\text{contraband on whites}}$  All else being equal, if racial profiling does not exist, then given a search, the proportion of finding contraband on Hispanics will be greater than or equal to the proportion of finding contraband on Whites.
- (12)  $H_{a6} : P_{\text{contraband on Hispanics}} < P_{\text{contraband on whites}}$  All else being equal, if racial profiling does exist, then given a search, the proportion of finding contraband on Hispanics will be less than the proportion of finding contraband on Whites.

To test for statistical significance of racial profiling, or racial disparities to be more exact, in search and hit rates, three quantitative methods have been employed. First is a simple cross tabulation comparison of searches and discovery of contraband by race. Percentages of search and hit rates for Whites, Blacks, and Hispanics are tabulated, and then compared to each other. Whites searched are tabulated versus Whites stopped, Blacks searched are tabulated versus Blacks stopped, and Hispanics searched are tabulated versus Hispanics stopped. The same methodology is employed for discovery of contraband in the event of a search, by each racial group.

Second, a statistical difference of binary proportions test is performed to test the foregoing hypotheses at a statistically significant (alpha) level. Third and last, logit models are performed to test for the odds of being searched or contraband being discovered by DPS, if one is of a particular race/ethnicity (Black/Hispanic), while holding other non-racial variables constant. Explanatory variables held constant are age, sex, out-of-state drivers license, and certain interaction terms.

Some caveats are in order. First, the present methodology (indeed all statistical methodologies) is constrained by the dataset. As a practical matter, what this means is that the decision to search is admittedly based upon more, perhaps many more, variables than are patently available. No dataset can possibly account for all explanatory variables, some of which in part end up in the so-called "error" term of the equation.<sup>507</sup> Some of these error terms, however, are susceptible to quantification, thus allowing placement into the quantifiable independent variable matrix. For the present, however, it should be noted that the logit regressions do not, and cannot, account for all possible explanatory variables for predicting the odds of being searched or contraband being discovered. But they do control for as many of the relevant variables as are present in the dataset, including some additional ones created by interacting the available variables. Relevant variables include race and sex, young (under 30 years old), and interaction terms, such as Black male, Hispanic male, young Black, and young Hispanic.

At least two more caveats are in order. In the logit model, since every subject in the dataset has been stopped, using "stop" as a dependent variable would result in perfect identification, since for every observation there would be a one hundred percent chance of success (a stop). In logit, this would yield a beta of negative infinity for each independent variable, with a standard error of infinity, obviously rendering any results useless. Finally, other things being equal, the odds of being stopped by DPS are directly proportional to the number of miles driven on roads patrolled by the DPS. It is axiomatic that the more one drives on Texas highways, the more likely one is to be stopped by DPS, and vice versa. Since neither the DPS, nor the state of Texas or the United States Census Bureau, collect data on number of miles driven in a state by race, a proxy variable must be used to estimate this figure. The proxy generated was based upon the closest correlation that could be found to the number of miles driven by racial group on Texas highways. These data came from Summary File 3 (SF 3) of the 2000 United States Census Bureau Sample Data; Table PCT55, "Means of Transportation to Work for Workers 16 Years and Over."

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507. See GUJARATI, *supra* note 144, at 5.

The Census Bureau defines “means of transportation to work” as: derived from answers to long-form questionnaire Item 23a, which was asked of a sample of the population 15 years old and over. This question was asked of people who indicated in Question 21 that they worked at some time during the reference week. . . . Means of transportation to work refers to the principal mode of travel or type of conveyance that the worker usually used to get from home to work during the reference week. Data were tabulated for workers 16 years old and over; that is, members of the armed forces and civilians who were at work during the reference week.<sup>508</sup>

These data are blocked by the Census Bureau by race for “White alone,” “Black or African-American alone,” and “Hispanic or Latino (of any race)”. By racial/ethnic group, the Census data reflect:

- Car, truck, or van
  - Drove alone or carpooled
- Public transportation
  - Bus or trolley bus
  - Streetcar or trolley car
  - Subway or elevated
  - Ferryboat
  - Taxicab
- Motorcycle
- Bicycle
- Walked
- Other

From these data, the variable selected as a proxy for miles driven was – by racial or ethnic group – car, truck, or van, without blocking for driving alone or carpooling. In other words, the proxy variable includes vehicles – car, truck, or van – with one or more occupants.

In the logit model, to determine the probability of occurrence of an event, or a so-called “success,” 1 represents “success” and 0 represents “not a success.” “Success” is non-normative, implying nothing good or bad, simply the occurrence or non-occurrence of the event in interest, i.e., a search or discovery of contraband. Again, an event of interest does not include “stop,” due to the perfect identification problem.

This study relies upon quantitative methods adopted from Ross and Yinger, discussed earlier. A binary logit model is used to determine the

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508. U.S. CENSUS BUREAU, SUMMARY FILE 4, SUBJECT CHARACTERISTIC: JOURNEY TO WORK, <http://www.census.gov/Press-Release/www/2003/SF4.html> (last visited Mar. 11, 2006).

probability of being searched if one is Black or Hispanic, compared to White. To corroborate this model, actual search rates of Blacks and Hispanics, compared to Whites, are tabulated.

The search rate is the percentage of search for a particular group, given the number of members of that group who have been stopped. Expressed mathematically:

$$\text{Search rate} = \frac{\# \text{ members of group searched}}{\# \text{ members of group stopped}}$$

Then the hit rate (actually finding contraband) is calculated for Black, Hispanic, and White. Expressed mathematically:

$$\text{Hit rate} = \frac{\# \text{ times contraband discovered}}{\# \text{ members of group searched}}$$

For example, the hit rate for Whites would be number of times contraband was discovered on Whites searched. These hit rates then may be compared across groups to each other.

The first dependent variable is "search," more precisely searched given a stop, but for brevity it is denominated "search." The second dependent variable is "contraband" (discovery of) given a search.

Since the dependent variables are binary (0 or 1), logit is an appropriate model by which to measure the success rate of the event in interest. It is preferable to the linear probability model, which among other infirmities may suffer from absurd predictions of negative dependent variable values or values greater than one, and is the wrong functional form (incremental coefficient changes may incorrectly appear as linear or constant, as opposed to curvilinear – such as diminishing marginal effects).<sup>509</sup> In logit, the odds are expressed as

$$\frac{P_i}{1-P_i}.$$

The logit model itself is expressed as

$$L_i = \ln \left[ \frac{P_i}{1-P_i} \right],$$

or the natural log odds of an event occurring.<sup>510</sup> Logit employs a likelihood ratio statistic, which approximates a chi-squared ( $\chi^2$ ) distribution.<sup>511</sup>

509. J. SCOTT LONG, *REGRESSION MODELS FOR CATEGORICAL AND LIMITED DEPENDENT VARIABLES* 133-35 (1997).

510. See GUJARATI, *supra* note 144, at 554-63.

511. WILLIAM H. GREENE, *ECONOMETRIC ANALYSIS* 882-86 (Leah Jewell et al., eds., 3rd ed. 1997).

In this study, logit is used to estimate the odds of a search or discovery of contraband given a search if a person is of a particular race or ethnicity.

### A. *Statewide Cross-Tabulation Comparisons of Searches*

#### 1. 2002

In 2002, DPS stopped 95,460 African-Americans, and searched 9,415, or 9.87 percent; 244,177 Hispanics and searched 22,573, or 9.24 percent; and 627,578 Whites and searched 39,117 or 6.23 percent. These figures compare to Blacks comprising 10 percent; Hispanics 26 percent; and Whites 60 percent, respectively, of the population of Texas drivers, according to the 2000 United States Census. As the Figure 4.1 illustrates, Whites comprised 6.23 percent of the total searches that year, African-Americans – 9.87 percent; and Hispanics – 9.26 percent. Table 4.1 reflects search rates by race for the year 2002.

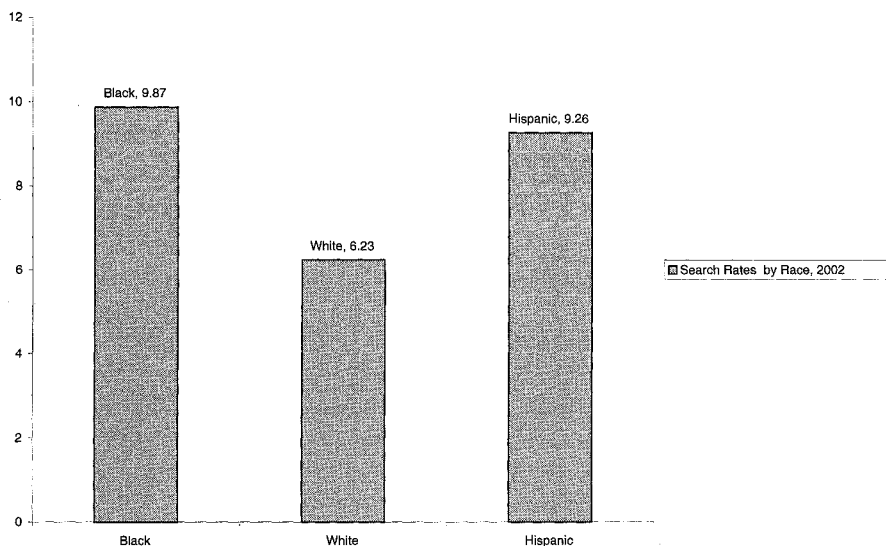


FIGURE 4.1 SEARCH RATES BY RACE, 2002

#### 2. 2003

In 2003, from a combined dataset of warnings and citations, DPS stopped 198,128 African-Americans, and searched 12,024 or 6.07 percent of them; 488,936 Hispanics, resulting in 49,254 searches, or 10.07 percent; and 1,439,348 Whites, resulting in 51,467 searches, or 3.58 percent. This compares to Blacks comprising 10 percent, Hispanics 26 percent, and

Whites 60 percent, respectively, of the population of Texas drivers. Figure 4.2 reflects search rates by race for 2003.

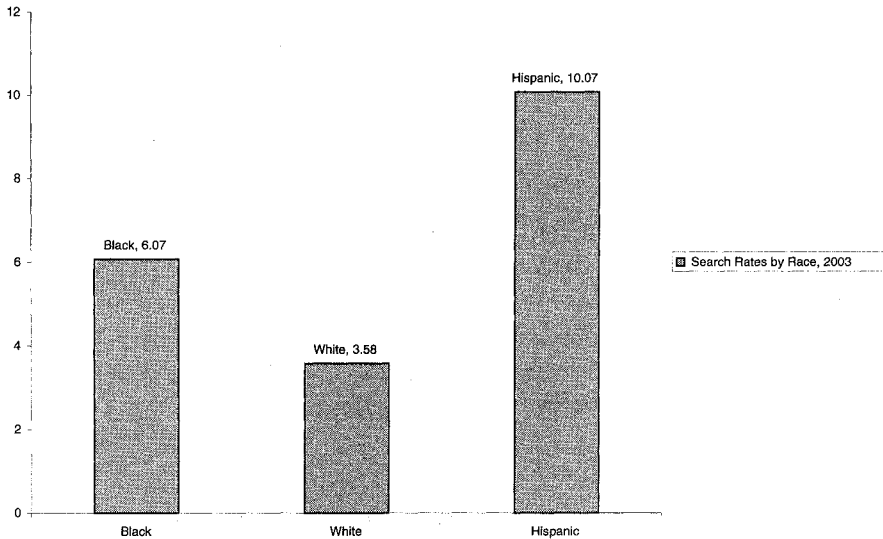


FIGURE 4.2 SEARCH RATES BY RACE, 2003

#### B. *Statewide Cross-Tabulation Comparisons of Hit Rates*

In order for these higher search rates on African-Americans and Hispanics to reflect good police practices rather than racial harassment, the hit rates should be higher for African-Americans and Hispanics than for Whites. It should be cautioned, however, that recording discovery of contraband in the present database is not tantamount to forensic evidence of, or a final conviction for possessing, contraband. It is only the trooper's perception of the existence of contraband, and his or her recording as such on the citation or warning. Cocaine may in fact ultimately turn out to be pulverized billiard chalk, but this ultimate determination is not reflected in the dataset. Thus, a positive hit recorded in the database should not be construed as actual possession of contraband or a conviction. It is simply the best data available.

##### 1. 2002

Figure 4.3 compares the statewide search rates to hit rates by Black, White, and Hispanic. As reflected in Figure 4.3, Whites had a search rate of 6.23 percent to a hit rate of 40.11 percent; Blacks had a search rate of



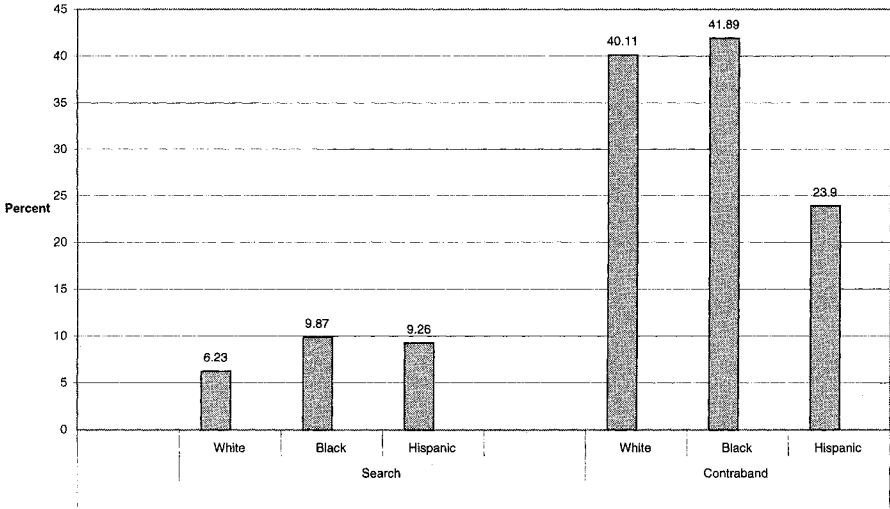


FIGURE 4.3 2002 SEARCH AND CONTRABAND RATES, BY RACE

9.87 percent to a hit rate of 41.89 percent; and Hispanics had a search rate of 9.26 percent to a hit rate of 23.9 percent.

## 2. 2003

Figure 4.4 illustrates the same thing as Figure 4.3, except for 2003. Whites had a search rate of 3.58 percent, compared to a hit rate of 34.49 percent; Blacks had a search rate of 6.07 percent, compared to a hit rate of 35.30 percent; and Hispanics had a search rate of 10.07 percent compared to a hit rate of 12.54 percent.

## C. Summary Interpretation of Search and Hit Rates

### 1. 2002

By a narrow margin, Blacks had the highest search rate by race; Hispanics were a close second; and Whites had the lowest search rate by race of all three groups. But the rates reflect disproportionality between searches and hit rates. Blacks were searched about 58 percent (1.582) more than Whites, but had about an equal hit rate (41.89 versus 40.11). Hispanics were searched almost fifty percent more than Whites (1.484), but had a hit rate only 60 percent (.596) that of Whites. Whites had the lowest percent search rate by a fairly wide margin – about one-third less – than either Blacks or Hispanics, but had a hit rate about equal to Blacks, and about 40 percent higher than Hispanics.

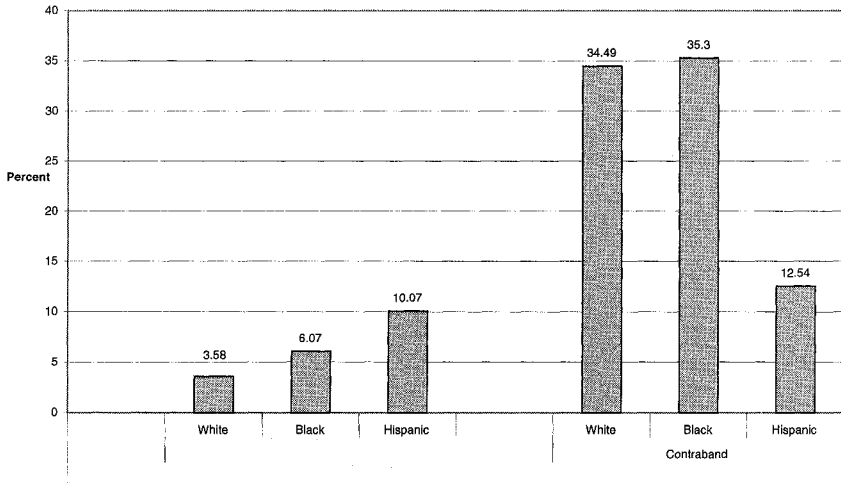


FIGURE 4.4 2003 SEARCH AND CONTRABAND RATES, BY RACE

## 2. 2003

This year, Hispanics had the highest search rate by race by a considerable margin – almost three times (2.8 times) that of Whites, and about two-thirds higher than that of Blacks. But the Hispanic hit rate fell by about one-half from the previous year – from 23.9 to 12.54, the lowest hit rate for all three groups. Their search rate, however, was eight percent higher than from the previous year. For the second year, Blacks and Whites had essentially equal hit rates – 35.3 to 34.49, respectively – although the search rate for Blacks was about 70 percent higher for Blacks than for Whites.

### D. *Summary Results for 2002 and 2003*

For both years, Hispanics have much higher search rates by race than either Blacks or Whites, but much lower hit rates for both years. Blacks have higher search rates than Whites, but a hit rate for all practical purposes equal to Whites, again for both years.

What these results reflect is law enforcement inefficiency. A pattern emerges that Hispanics are being targeted more often than their White and Black counterparts, despite the fact that they are discovered possessing contraband less often than either. From the data, it may be inferred that both Blacks and Hispanics are targeted more often for search than their White counterparts, even though hit rates for Blacks are essentially equal, and for Hispanics lower, than for Whites. In terms of economic efficiency of allocating scarce law enforcement resources to areas of the

greatest need, this would be indicative of inefficiency. If one were to desire to restore equilibrium to the forces of supply and demand imposed upon law enforcement, resources would be more efficiently allocated by targeting Hispanics and Blacks less, and Whites more. Economics aside, in the context of the constitutional guarantee of equal protection of law, the rates indeed reflect racial disparities.

#### E. *Racial Disparities in Search Rates by DPS Region*

Geographically, the Texas Department of Public Safety is divided into regions and districts. Prior to September 1, 2003, there were seven regions; subsequent to a reorganization effective that date, the number of regions was increased to eight. Both before and after September 1, 2003, region seven was the State Capitol grounds, the building, not the City of Austin. What follows as Figures 4.5 and 4.6 are search rates by race by DPS region for years 2002 and 2003. Figures 4.7 and 4.8 are pre and post reorganization maps of the DPS regions and districts. As is evident from the figures, Blacks are searched at a higher rate than Whites, but Hispanics are searched at higher rates than either Blacks or Whites by region, continuing the pattern evident from the cross tabulations.

#### F. *Consensual Searches*

A hypothesis attempting to explain the disparities in search rates between Hispanics and Blacks and Whites is that Hispanics, some of whom may be less fluent in English than Blacks or Whites, may be more subject to consensual search, due to intimidation of the language barrier. While it is possible with the present dataset to discern numbers and percentages of consensual searches by race, limitations exist by dint of the data not reflecting whether a subject was in fact asked for consent to search. Thus, it is possible that Hispanics were asked less often to consent than the other groups. As is evident from Figure 4.9, consensual searches performed on Hispanics were less than those performed on Blacks or Whites for both years. But nothing here reflects whether Blacks and Whites were asked for consent more or less often than Hispanics. All that can be gleaned is that the majority of consensual searches were performed on Blacks, then Whites, and least on Hispanics. So problematic are consensual searches that they have been criticized in a study prepared for the Texas Criminal Justice Coalition (TCJC), the American Civil Liberties Union of Texas (ACLU), the League of Latin American Citizens of Texas (LULAC), and the Texas State Conference of NAACP Branches

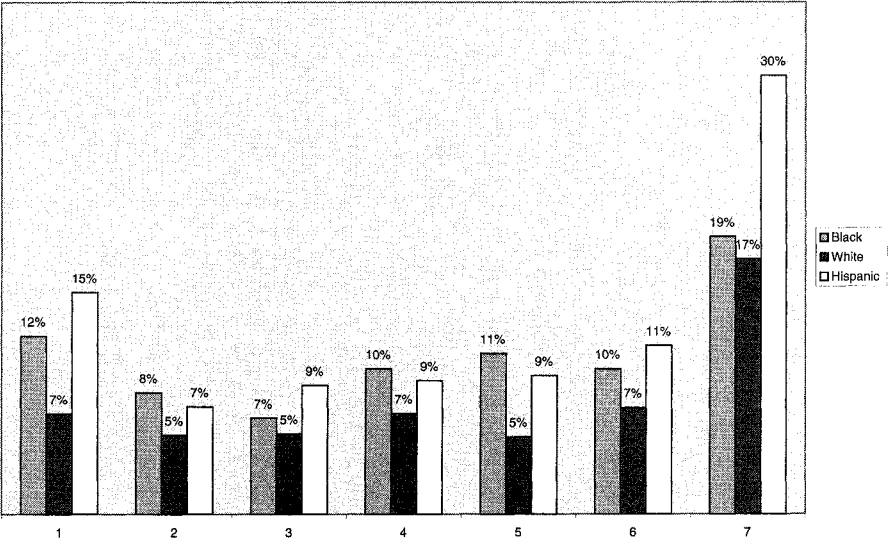


FIGURE 4.5 SEARCH RATE BY DPS REGION, 2002

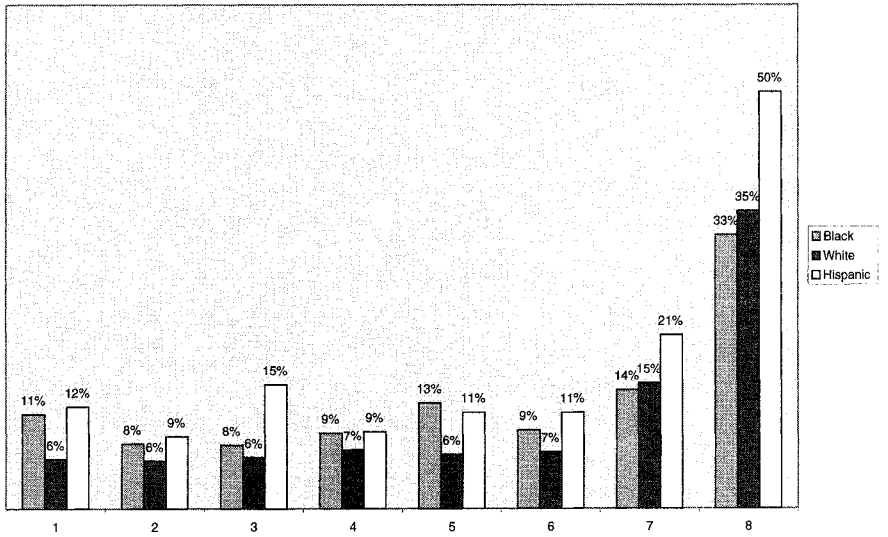


FIGURE 4.6 SEARCH RATE BY DPS REGION, 2003

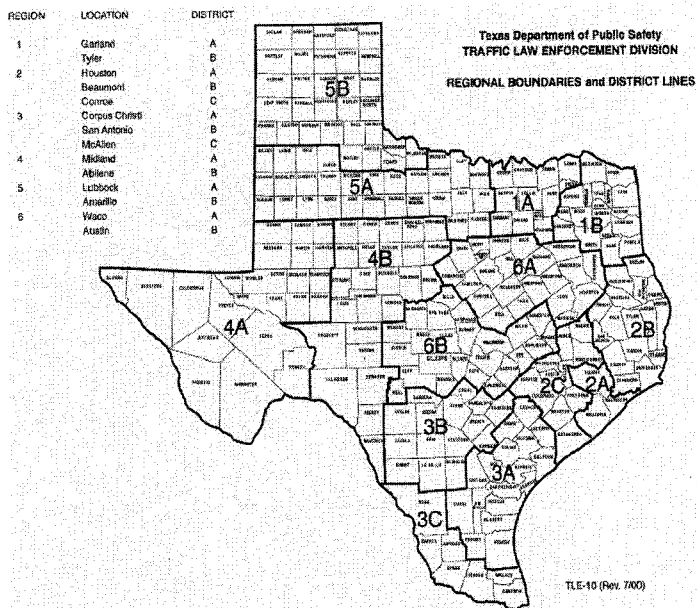


FIGURE 4.7 PRIOR SEPTEMBER 1, 2003 DPS REGIONS AND DISTRICTS

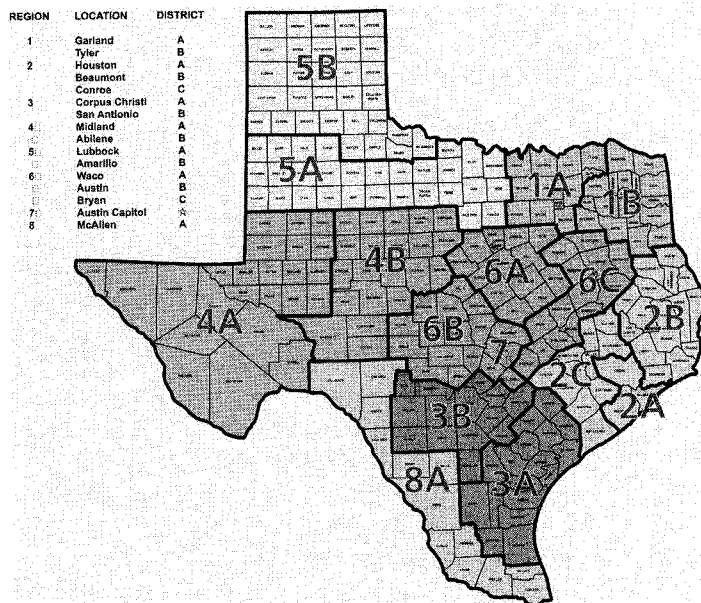


FIGURE 4.8 POST SEPTEMBER 1, 2003 DPS REGIONS AND DISTRICTS

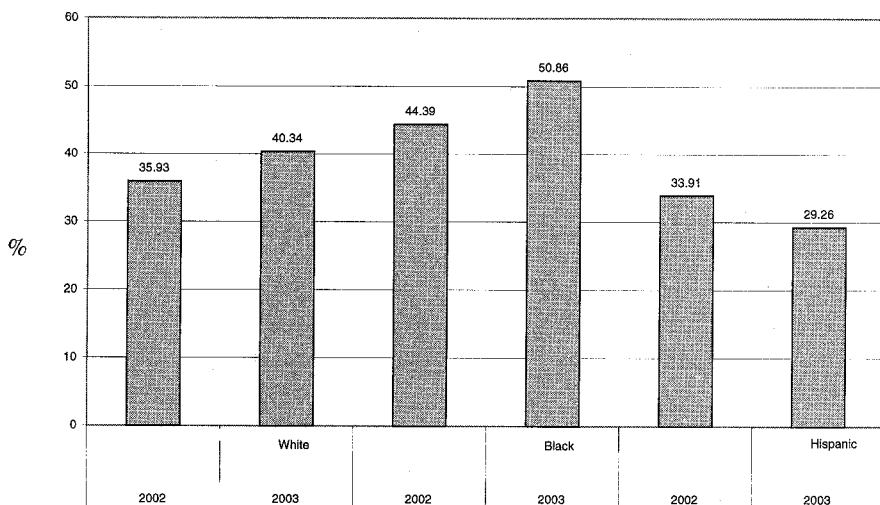


FIGURE 4.9 CONSENSUAL SEARCHES BY RACE, 2002-2003

(NAACP). Among other things, this study recommends banning consensual searches.<sup>512</sup>

#### G. *Difference of Binomial Proportions Tests*

While it would be helpful to compare rates of stops by race statewide to numbers of miles driven by race on roads patrolled by DPS, a major problem is that data on miles driven by race are not collected by the U.S. Census or the State of Texas. Therefore, a proxy variable in lieu of miles driven on Texas roads by race must be created. The chosen proxy is means of transportation to work, according to the U.S. Census Bureau. The rationale is transportation upon public roads by privately owned vehicle by race was the closest variable to miles driven by race that could be gleaned from existing data. According to the 2000 United States Census, Texas has a total population of 20,851,820 people. Of the total Texas population, Whites comprise 71 percent (14.8 million), Blacks or African-Americans – 11.5 percent (2.4 million), and Hispanics (defined as an ethnicity, not a race) of any race – 32 percent (6.7 million).

According to a sample taken by the Census Bureau, in the year 2000, 8,441,602 Texans used a private vehicle to commute to work.<sup>513</sup> “Private vehicle occupancy refers to the number of people who usually rode to

512. See STEWARD & TOTMAN, *supra* note 2.

513. U.S. CENSUS BUREAU: JOURNEY TO WORK 2000 9 (2004).

work in the vehicle during the reference week.”<sup>514</sup> “Drove alone” includes people who drove to work alone, as well as those who were dropped off at work by someone else.<sup>515</sup> “Carpooled” means two or more people commuting to work in a single vehicle during the week.<sup>516</sup> Of this total, 78.8 percent of Whites drove alone, 65.9 percent of African-Americans drove alone, and 83.2 percent of Hispanics or Latinos (of any race) drove to work in a car, truck, or van, either alone or in a carpool.<sup>517</sup> Percentages of the total Texas population that drove privately owned vehicles to work are as follows:

White alone: 6.3 million/9.16 million = .69 or 69 percent

Black or African-American alone: 0.84 million/9.16 million = .09 or 9 percent

Hispanic or Latino (of any race): 2.2 million/9.16 million = .24 or 24 percent

Since the data do not reflect number of miles driven by race, from the proxy it may be inferred that mileage rates by race would be similar to the foregoing percentages. Indeed, in that the vehicle commuting rates are not out of line with the proportional racial composition of the entire state, such an inference does not seem outlandish.

Tables 4.1 through 4.5 reflect percentages of DPS traffic stops of Texas drivers by race for White, Black, and Hispanic for the years 2000 through 2003. These percentages are used to test for z scores of statistical significance in differences of binomial proportions of stops by race. Using a normal distribution (z) table at a .05 level of significance for a one tailed test, the decision rule is to reject the null hypothesis of no difference in proportions based upon race if z scores are greater than 1.645, or less than -1.645, depending on whether it is a lower (left) tail or upper (right) tail test of significance.

Applying this test, a comparison is made between the proportions of Black motorists to White motorists stopped, and Hispanic motorists to White motorists stopped on Texas roads by the Highway Patrol.

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514. U.S. CENSUS BUREAU, USING THE DATA: SUBJECT DEFINITIONS, [http://www.census.gov/acs/UseData/Def/J\\_towork.htm](http://www.census.gov/acs/UseData/Def/J_towork.htm).

515. U.S. CENSUS BUREAU, AMERICAN COMMUNITY SURVEY: 2002 SUBJECT DEFINITIONS 54 (2002), available at [http://www.census.gov/acs/www/Downloads/2002/usedata/Subject\\_Definitions.pdf](http://www.census.gov/acs/www/Downloads/2002/usedata/Subject_Definitions.pdf).

516. *Id.*

517. U.S. CENSUS BUREAU, *supra* note 513, at 4.







TABLE 4.5 TEXAS POPULATION, DRIVERS, AND TRAFFIC STOPS 2003 WARNINGS						
	Population	% Population	Drivers	% Drivers	Stops	% Stops
Total	20851820		8441602		1066493	
White	10927538	52%	5030913	60%	739321	67%
Black	2349641	11%	826761	10%	95119	9%
Hispanic	6670122	32%	2209402	26%	216315	20%
		Drivers as % of Pop. By Race	Stops as % of Pop. By Race	Stops as % of Drivers by Race		
Total		40%	5%		13%	
White		46%	7%		15%	
Black		35%	4%		12%	
Hispanic		33%	3%		10%	
1. For race, "White" and "Black" refer to non-Hispanic persons of a single race.						
2. Drivers include all persons 16 years and over who commute to work by car, truck, or van.						
3. Percentages are rounded.						
Sources:						
Texas Population: 2000 U.S. Census, SF3, Table P7						
Drivers: 2000 U.S. Census, SF4, Table PCT55						
Stops: DPS Warnings file for 2003						

H. *Hypotheses Numbers One and Two (Restated):*

H<sub>01</sub> :P<sub>blacks stopped</sub> ≥ P<sub>whites stopped</sub> All else being equal, if racial profiling does not exist, then the proportion of Blacks stopped will be less than or equal to the proportion of Whites stopped.

H<sub>a1</sub> :P<sub>blacks stopped</sub> > P<sub>whites stopped</sub> All else being equal, if racial profiling does exist, then the proportion of Blacks stopped will be greater than the proportion of Whites stopped.

H<sub>02</sub> :P<sub>Hispanics stopped</sub> ≥ P<sub>whites stopped</sub> All else being equal, if racial profiling does not exist, then the proportion of Hispanics stopped will be less than or equal to the proportion of Whites stopped.

H<sub>a2</sub> :P<sub>Hispanics stopped</sub> > P<sub>whites stopped</sub> All else being equal, if racial profiling does exist, then the proportion of Hispanics stopped will be greater than the proportion of Whites stopped.

Decision rule is to reject the null if Z > 1.645.

**For year 2000:**

Proportion of Blacks to Whites stopped:

$$Z = \frac{(0.119-0.144)}{\sqrt{(0.141*0.859) \left[ \frac{1}{98,192} + \frac{1}{725,750} \right]}} = -21.13 \text{ Do not reject null.}$$

Proportion of Hispanics to Whites stopped:

$$Z = \frac{(0.084-0.144)}{\sqrt{(0.126*0.874) \left[ \frac{1}{184,594} + \frac{1}{725,750} \right]}} = -68.04 \text{ Do not reject null.}$$

**For year 2001:**

Proportion of Blacks to Whites stopped:

$$Z = \frac{(0.118-0.135)}{\sqrt{(0.132*0.868) \left[ \frac{1}{97,353} + \frac{1}{677,194} \right]}} = -14.61 \text{ Do not reject null.}$$

Proportion of Hispanics to Whites stopped:

$$Z = \frac{(0.107-0.135)}{\sqrt{(0.126*0.874) \left[ \frac{1}{236,672} + \frac{1}{677,194} \right]}} = -35.13 \text{ Do not reject null.}$$

**For year 2002:**

Proportion of Blacks to Whites stopped:

$$Z = \frac{(0.116-0.125)}{\sqrt{(0.124*0.876) \left[ \frac{1}{95,538} + \frac{1}{628,452} \right]}} = -7.87 \text{ Do not reject null.}$$

Proportion of Hispanics to Whites stopped:

$$Z = \frac{(0.111-0.125)}{\sqrt{(0.121*0.879) \left[ \frac{1}{244,972} + \frac{1}{628,452} \right]}} = -18.02 \text{ Do not reject null.}$$

**For year 2003 Citations:**

Proportion of Blacks to Whites stopped:

$$Z = \frac{(0.125-0.139)}{\sqrt{(0.137*0.863) \left[ \frac{1}{102,945} + \frac{1}{699,037} \right]}} = -12.19 \text{ Do not reject null.}$$

Proportion of Hispanics to Whites stopped:

$$Z = \frac{(0.123-0.139)}{\sqrt{(0.134*0.866) \left[ \frac{1}{271,752} + \frac{1}{699,037} \right]}} = -20.74 \text{ Do not reject null.}$$

**For year 2003 Warnings:**

Proportion of Blacks to Whites stopped:

$$Z = \frac{(0.115-0.147)}{\sqrt{(0.142*0.858) \left[ \frac{1}{95,119} + \frac{1}{739,321} \right]}} = -26.51 \text{ Do not reject null.}$$

Proportion of Hispanics to Whites stopped:

$$Z = \frac{(0.098-0.147)}{\sqrt{(0.132*0.868) \left[ \frac{1}{216,315} + \frac{1}{739,321} \right]}} = -59.49 \text{ Do not reject null.}$$

## VI. CONCLUSION AS TO PROPORTIONALITY OF STOPS BY MILE BY RACE:

For none of the years for all three races do the z scores exceed the critical value of 1.645. The null hypothesis of no statistically significant difference in proportions of stops by race is not rejected. For all four years, Blacks and Hispanics were not stopped at disproportionately higher rates than their White counterparts, all else other than race, being equal. Nevertheless, a certain measure of caution should be exercised in light of the possible downward bias in consideration of the primary rural responsibility of the Highway Patrol.

A. *Hypotheses Numbers Three and Four (Restated):*

$H_{03} : P_{\text{blacks searched}} \geq P_{\text{whites searched}}$  All else being equal, if racial profiling does not exist, then the proportion of Blacks searched will be less than or equal to the proportion of Whites searched.

$H_{a3} : P_{\text{blacks searched}} > P_{\text{whites searched}}$  All else being equal, if racial profiling does exist, then the proportion of Blacks searched will be greater than the proportion of Whites searched.

$H_{04} : P_{\text{Hispanics searched}} \geq P_{\text{whites searched}}$  All else being equal, if racial profiling does not exist, then the proportion of Hispanics searched will be less than or equal to the proportion of Whites searched.

$H_{a4} : P_{\text{Hispanics searched}} > P_{\text{whites searched}}$  All else being equal, if racial profiling does exist, then the proportion of Hispanics searched will be greater than the proportion of Whites searched.

To test these hypotheses, first, search rates have been determined by taking the ratio of suspects searched to those stopped, by race, then performing difference of proportions testing for search of Blacks versus Whites, and Hispanics versus Whites. Search rates were blocked by each racial group, i.e., Whites searched to Whites stopped, Blacks searched to Blacks stopped, and Hispanics searched to Hispanics stopped, rather than suspects searched by race to total population of everyone stopped, to avoid contamination of racial composition of the population under examination. Also, owing to the infirmities plaguing the search variable for years 2000 and 2001, *supra*, search rates will be confined to the years 2002 and 2003. Search rates were as follows:

**Year 2002:**

Whites:  $39,193/628,452 = 6.24$  percent

Blacks:  $9,425/95,538 = 9.90$  percent

Hispanics:  $22,682/244,972 = 9.30$  percent

**Year 2003 Citations:**

Whites:  $45,550/700,027 = 6.51$  percent

Blacks:  $9,774/103,009 = 9.49$  percent

Hispanics:  $43,022/272,621 = 15.78$  percent

**Year 2003 Warnings:**

Whites:  $5,917/739,321 = 0.80$  percent

Blacks:  $2,250/95,119 = 2.37$  percent

Hispanics:  $6,232/216,315 = 2.88$  percent

Decision rule is to reject  $H_0$  if  $Z > 1.645$ .

Difference of proportions testing yields the following test statistics:

**Year 2002:**

Blacks to Whites:

$$Z = \frac{(0.099-0.062)}{\sqrt{(0.067*0.933) \left[ \frac{1}{95,538} + \frac{1}{628,452} \right]}} = -42.09 \text{ Reject the null. } P = 0.00$$

Hispanics to Whites:

$$Z = \frac{(0.093-0.062)}{\sqrt{(0.071*0.929) \left[ \frac{1}{244,972} + \frac{1}{628,452} \right]}} = -50.03 \text{ Reject the null. } P = 0.00$$

**Year 2003 Citations:**

Blacks to Whites:

$$Z = \frac{(0.095-0.065)}{\sqrt{(0.069*0.931) \left[ \frac{1}{103,009} + \frac{1}{700,027} \right]}} = -35.51 \text{ Reject the null. } P = 0.00$$

Hispanics to Whites:

$$Z = \frac{(0.158-0.065)}{\sqrt{(0.091*0.909) \left[ \frac{1}{272,621} + \frac{1}{700,027} \right]}} = -143.18 \text{ Reject the null. } P = 0.00$$

**Year 2003 Warnings:**

Blacks to Whites:

$$Z = \frac{(0.024-0.008)}{\sqrt{(0.009*0.991) \left[ \frac{1}{95,119} + \frac{1}{739,321} \right]}} = -47.10 \text{ Reject the null. } P = 0.00$$

Hispanics to Whites:

$$Z = \frac{(0.029-0.008)}{\sqrt{(0.013*0.987) \left[ \frac{1}{216,315} + \frac{1}{739,321} \right]}} = -76.56 \text{ Reject the null. } P = 0.00$$

VII. CONCLUSIONS AS TO PROPORTIONALITY OF SEARCHES  
(GIVEN STOPPED) BY RACE:

For both years, for all three races, the  $z$  scores greatly exceed the critical value of 1.645. The null hypotheses of no statistically significant difference in proportions of search rates by race are rejected; and the rejection is highly significant. There is practically zero probability of Type I error, or incorrectly rejecting the null hypothesis. For both years, Blacks and Hispanics were searched at disproportionately higher rates than their White counterparts, where all else other than race being equal.

A. *Hypotheses Numbers Five and Six (Restated):*

$H_{05} : P_{\text{contraband on blacks}} \geq P_{\text{contraband on whites}}$  All else being equal, if racial profiling does not exist, then given a search, the proportion of finding contraband on Blacks will be greater than or equal to the proportion of finding contraband on Whites.

$H_{a5} : P_{\text{contraband on blacks}} < P_{\text{contraband on whites}}$  All else being equal, if racial profiling does exist, then given a search, the proportion of finding contraband on Blacks will be less than the proportion of finding contraband on Whites.

$H_{06} : P_{\text{contraband on Hispanics}} \geq P_{\text{contraband on whites}}$  All else being equal, if racial profiling does not exist, then given a search, the proportion of finding contraband on Hispanics will be greater than or equal to the proportion of finding contraband on Whites.

$H_{a6} : P_{\text{contraband on Hispanics}} < P_{\text{contraband on whites}}$  All else being equal, if racial profiling does exist, then given a search, the proportion of finding contraband on Hispanics will be less than the proportion of finding contraband on Whites.

To test these hypotheses, first, hit rates have been determined by taking the ratio of contraband found on suspects searched by race, then performing difference of proportions tests for contraband on Blacks versus contraband on Whites, and Hispanics versus Whites. Hit rates were blocked by each racial group, i.e., contraband found on Whites to Whites searched, contraband found on Blacks to Blacks searched, and contraband found on Hispanics to Hispanics searched. Also, owing to the infirmities plaguing the search variable for years 2000 and 2001, *supra*, hit rates will be confined to the years 2002 and 2003. Hit rates were as follows:

**Year 2002:**

Whites:  $15,722/39,193 = 40.11\%$

Blacks :  $3,948/9,425 = 41.89\%$

Hispanics:  $5,420/22,682 = 23.90\%$

**Year 2003 Citations:**

Whites:  $17,140/45,550 = 37.63\%$

Blacks :  $3,950/9,774 = 40.41\%$

Hispanics:  $5,932/43,022 = 13.79\%$

**Year 2003 Warnings:**

Whites:  $610/5,917 = 10.31\%$

Blacks :  $295/2,250 = 13.11\%$

Hispanics:  $244/6,232 = 3.92\%$

Decision rule is to reject the null if  $Z < -1.645$ .

Difference of proportions testing yields the following test statistics:

**2002:**

Blacks to Whites:

$$Z = \frac{(0.419-0.401)}{\sqrt{(0.405*0.595) \left[ \frac{1}{9,425} + \frac{1}{39,193} \right]}} = -3.16 \text{ Do not reject null.}$$

Hispanics to Whites:

$$Z = \frac{(0.239-0.401)}{\sqrt{(0.342*0.658) \left[ \frac{1}{22,682} + \frac{1}{39,193} \right]}} = -40.97 \text{ Reject the null. } P = 0.00.$$

**2003 Citations:**

Blacks to Whites:

$$Z = \frac{(0.404-0.376)}{\sqrt{(0.381*0.619) \left[ \frac{1}{9,774} + \frac{1}{45,550} \right]}} = -5.13 \text{ Do not reject null.}$$

Hispanics to Whites:

$$Z = \frac{(0.138-0.376)}{\sqrt{(0.260*0.740) \left[ \frac{1}{43,022} + \frac{1}{45,550} \right]}} = -80.79 \text{ Reject the null. } P = 0.00.$$



**2003 Warnings:**

Blacks to Whites:

$$Z = \frac{(0.131 - 0.103)}{\sqrt{(0.111 * 0.889) \left[ \frac{1}{2,250} + \frac{1}{5,917} \right]}} = -3.60 \text{ Do not reject null.}$$

Hispanics to Whites:

$$Z = \frac{(0.039 - 0.103)}{\sqrt{(0.070 * 0.930) \left[ \frac{1}{6,232} + \frac{1}{5,917} \right]}} = -13.77 \text{ Reject the null. } P = 0.00.$$

### VIII. CONCLUSIONS AS TO PROPORTIONALITY OF FINDING CONTRABAND (GIVEN SEARCHED) BY RACE

Just by “eyeballing” the figures for both years, one can conclude that Blacks and Whites share very similar hit rates. This is true despite that for both years the null hypothesis, of finding contraband on Blacks is equal to or greater than for Whites, is not rejected. The significance of this is that although Blacks do exhibit marginally higher hit rates than Whites, the difference is not statistically significant. This is also true despite the fact that Blacks exhibit higher search rates than Whites for both years, further corroborating racial disparity between them.

For Hispanics, the null hypothesis is soundly rejected, and there is essentially no probability of committing Type I error by falsely rejecting it. The significance of these findings, and they are strong, is that the proportions of finding contraband on Hispanics are less than that for Whites, despite the fact that Hispanics endured much higher search rates than either Whites for both years. The conclusion is that racial disparity in search to hit rates exists between Whites and Hispanics.

#### A. *The Logic of Logit*

The purpose of regression analysis is to seek, through quantification, causal relationships of explanatory variables (independent variables) upon effect variables (dependent variables). The rationale is to hold constant (such as at their means) factors other than the explanatory variables of interest (such as age or sex), which might also affect the dependent variable. The explanatory variables of interest are allowed to vary. Here the explanatory variables of interest are Black, Hispanic, and specific interactions of them with age, sex, and out-of-state status. White is the base

case against which Blacks and Hispanics are compared; under thirty year olds are compared to over thirty year olds; out-of-state is compared to Texas residents; and interaction terms are compared to their White counterparts.

The best way to measure racial profiling on the highways would be to conduct a true social experiment.<sup>518</sup> The ideal experiment would entail, a Black male and a White male of the same age and physical stature to drive down the same highway at the same time at the same speed in the same year and model vehicle, exhibiting the same driving mannerisms, and then record who was stopped and searched more often. For obvious reasons, this would be expensive and cumbersome. Moreover, in the social sciences, true experiments on human subjects, for ethical reasons, are often impractical or forbidden. Here, for instance, one or both drivers would be exposed to an inordinately large amount of accidents, traffic tickets, and arrests. In racial profiling literature, some authors have proposed or attempted to conduct quasi-social experiments, like physically observing troopers on the road,<sup>519</sup> or have never implemented tests, such as "triangulated" data collection.<sup>520</sup> Under current constraints, a more practical approach is to use secondary data collected by public officials charged by law with that responsibility, then performing regression analysis on the data to test for causal relationships.

As an example, to test their hypotheses about probability of mortgage loan performance, "such as loan profitability," or the probability that a borrower will not default, Ross and Yinger designed a logit model.<sup>521</sup> Like the model in this study, any initiative of this sort is going to be an *ex post facto* snapshot of what the data have revealed in the past. It is retrospective in nature.

Ross and Yinger were interested in measuring predictability of loan performance, which they denominated "P," based upon past performance.<sup>522</sup> In their model, "P" was a continuous variable, or credit score, so that the higher the score, the higher the probability that a loan would perform (not default). To determine probability of racial profiling, the dependent variable must be quantified other than continuous. Due to the nature of the data, the dependent variable must be binary – 1 or 0. One is a successful occurrence – a search, or discovery of contraband, and zero is just the opposite – a non-occurrence. Instead of "P," the logit model employed here denotes 1 as the probability of being searched, or finding

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518. Grogger & Ridgeway, *supra* note 39, at 5-6.

519. *Id.*

520. Lundman & Kaufman, *supra* note 102, at 214.

521. See ROSS & YINGER, *supra* note 64, at 278.

522. *Id.*

contraband, and  $X_1$  to  $X_n$  as a column vector of explanatory (independent) variables that a DPS trooper might employ in deciding whether or not to search. Again, in Ross and Yinger's model, these variables are continuous; but in the present model they are binary.<sup>523</sup> The betas, or coefficients of interest, reflect a mathematical measure of how much probability increases or decreases whenever a subject is of a particular race or ethnicity, while holding variables other than race constant. It is important to remember that independent variables, like the dependent variables, are coded 0 or 1 only for quantification purposes. There is no normative value attributed to whether one is White, Black, or Hispanic.

Ross and Yinger aggregated racial minorities into a single independent variable, "M," denoting minority status; but this model for racial profiling refrains from doing that, since it is interested in differentiating treatment among discrete racial groups.<sup>524</sup> Moreover, specific data to examine those differences among the major three racial groups exist. Combining terms, the racial profiling logit model is written:

$$\text{Search}_i = \alpha + \gamma_1 \text{Black}_i + \gamma_2 \text{Hispanic}_i + \sum_{j=1}^J \hat{\beta}_j X_{ji} + \varepsilon_i$$

where  $\alpha$  is a constant intercept;  $\gamma_1$  and  $\gamma_2$  are parameters representing slope (degree) of the binary variables;  $X_j$  is a column vector of  $j$  independent variables for  $i$  observations;  $\hat{\beta}_j$  is the estimated slope of the  $X_j$  variables; and  $\varepsilon$  is an error term. The symbol ^ (read "hat") simply means that  $\beta$  is an estimator, rather than an exactitude. The binary independent variables of interest are Black and Hispanic, and interaction terms of them. The higher the positive value of each racial coefficient, the more significant it is in the decision to search.

The methodology used in this study was to select search as the dependent variable with 1 for the occurrence of a search, and 0 for none. Independent binary variables are as follows. Race was first. Of the six categories of race/ethnicity in the database, only "White" was dropped as the comparison case to avoid collinearity; and although "Asian," "Indian," and "Unknown" were included in the regression, for simplicity, they were redacted from the results reported in the Tables. Other explanatory variables included in the regression as controls were "Out-of-State," "Male," and the following interaction terms: "Out-of-State Hispanic," "Out-of-State Black," "Black Male," "Hispanic Male," "Young Black" (under thirty years old), and "Young Hispanic" (under thirty years old). A constant (intercept) is also included. In the case of binary

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523. *Id.*

524. *Id.*

variables, a one unit discrete change from 0 to 1, or vice versa, means, for example, switching from White to Black or White to Hispanic.

Logit coefficients cannot be interpreted directly, since they reflect a relationship between the coefficients ( $\beta_j$ 's) and the unobservable latent nature of the dependent variable ( $y$ ). Latency is defined as an "underlying propensity" of an event to occur,<sup>525</sup> but the propensity is by nature unobservable.<sup>526</sup> Nevertheless, at some point the threshold of the event occurring is crossed.<sup>527</sup> For example, it may be that being Black or Hispanic as opposed to White increases (or decreases) the probability of being searched, but at what point does that occur? If one is either Black or Hispanic, the threshold is breached; but the precise point of breach is unclear. The dependent variable is measured as either 0 for not crossed, or 1 for crossed. Mathematically, this is expressed as

$$y_i = \begin{cases} 1 & \text{if } y^* > \tau \\ 0 & \text{if } y^* \leq \tau \end{cases}$$

where  $y^*$  is the latent dependent variable, and  $\tau$  is the threshold. Any observations greater than  $\tau$  equal 1, observations less than  $\tau$  equal 0.<sup>528</sup> For this reason, although the state of race may have an independent effect upon search, because it is latent, the logit results cannot be interpreted directly. As Long observes, " $\Pr(y = 1 \mid \mathbf{x})$  is an *estimable function*."<sup>529</sup> That is, the probability that a search or discovery of contraband occurs, given a vector of independent variables, can only be *estimated* by logit.

In the present model, when transitioning from 0 to 1, care must be taken that the probability of an event occurring does not exceed 1 (a one hundred percent probability) or go less than 0 (no probability). The boundaries of range of the dependent variable, either 0 or 1, in other words, cannot be breached. For a discrete change in binary variables, the mathematical equation may be expressed as

$$\Delta [\Pr(y = 1 \mid \bar{\mathbf{x}}, x_k = 1) - \Pr(y = 1 \mid \bar{\mathbf{x}}, x_k = 0)]$$

or the change in probability of the event occurring given observation  $x_k$  going from 0 (non-existence of the condition) to 1 (existence of the condition), holding all other independent variables equal at their mean.<sup>530</sup>

Another way of interpreting logit results is by looking at a change in the odds of an event occurring. "Odds" is defined as the ratio of

525. See LONG, *supra* note 509, at 40.

526. *Id.*

527. *Id.*

528. *Id.* at 41.

529. *Id.* at 49.

530. See LONG, *supra* note 509, at 78.

probabilities,<sup>531</sup> here for example, of occurrence of the event (numerator) over non-occurrence of the event (denominator). Again, according to Long (1997), this may be expressed mathematically as:

$$\frac{\Pr(y = 1 \mid \mathbf{x})}{\Pr(y = 0 \mid \mathbf{x})} = \frac{\Pr(y = 1 \mid \mathbf{x})}{1 - \Pr(y = 1 \mid \mathbf{x})}$$

or the probability of  $y$  happening, given the column vector of  $\mathbf{x}$ , divided by the probability of  $y$  not happening, given the column vector of  $\mathbf{x}$ . This equation is equal to the probability divided by 1 minus the probability; which would be the odds of something happening. Thus, for a unit change in  $x_k$ ,  $\beta$  changes in natural log odds, holding all other independent variables constant. Expressed mathematically, this is

$$\ln\left(\frac{p}{1-p}\right) = \mathbf{X} \beta + \varepsilon.$$

Another, perhaps somewhat more intuitive, way of interpreting logit results is by looking at the change in odds of something happening when  $x_k$  changes by some degree  $\delta$ , which requires exponentiating the  $\beta$ s; thus producing the odds ratio when, for example, a detainee goes from being White to Black or Hispanic. Expressed mathematically:  $e^\beta$ ; or for a single unit change  $\delta$  in  $x_k$ , the odds change (increase or decrease) by the exponential value of beta ( $e^\beta$ ), all other things being equal. Here then, if a detainee goes from White to Black or Hispanic, the odds of being searched, or discovery of contraband, change by the exponentiated value of the coefficient of interest (race). If  $e^{\beta_k} > 1$ , then the odds increase by  $e^{\beta_k}$ ; if  $e^{\beta_k} < 1$ , the odds decrease by  $e^{\beta_k}$ . Statewide logit results follow:

### 1. Statewide Logit Results

#### 2002

Descriptive statistics for independent variables:

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531. *Id.* at 59.

TABLE 4.6  
2002 DESCRIPTIVE STATISTICS

Variable	Mean	Standard Deviation
Black	.0967	.2955
Hispanic	.2473	.4315
Out of State	.1593	.3660
Out of State Black	.0192	.1372
Out of State Hispanic	.0464	.2104
Male	.7163	.4508
Black Male	.0676	.2510
Hispanic Male	.1881	.3901
Under 30	.4907	.4999
Black under 30	.0451	.2075
Hispanic under 30	.1313	.3378
Observations	987,186	
Minimum	0	
Maximum	1	

TABLE 4.7  
2002 SEARCH

	Coefficient	Odds Ratio	Discrete Change
Black	.032	1.032	.0022
	(0.26)		
Hispanic	.283	1.327	.0207
	(3.43)**		
Out of State	.282	1.326	.0213
	(14.79)**		
Out of State Hispanic	.351	1.420	.0278
	(12.77)**		
Out of State Black	.343	1.409	.0273
	(9.15)**		
Male	.823	2.278	.0502
	(44.61)**		
Black Male	.308	1.361	.0239
	(6.92)**		
Hispanic Male	.017	1.017	.0012
	(0.51)		
Under 30	.278	1.320	.0172
	(5.54)**		
Black under 30	.179	1.20	.0132
	(1.56)		
Hispanic under 30	-.057	.944	-.0039
	(-0.74)		
Constant		-3.53	
		(-67.78)**	
Observations		497,642	
Z scores in parentheses			
* significant at .05 level			
** significant at .01 level			

### Interpretation:

In 2002, Hispanics were more likely than Whites to be searched, given a stop by DPS. For Blacks, the race coefficient alone was statistically insignificant at even the ten percent level; but when combined with interaction terms for male, under thirty, or out-of-state, Blacks exhibit higher probability for search than for Whites.

For Hispanics, odds of being searched were about 33 percent higher than for Whites. If one were Hispanic, the discrete change for probability of being searched increased by about .02 (two percentage points) com-

pared to Whites, and the results were highly significant at the 99 percent level. Odds of out-of-state motorists being searched were almost a third (32.6%) higher than for Texas residents; and the discrete change of being searched increased by about two percentage points than if one were a Texas resident. All results for the out-of-state coefficient and racial interaction terms were very highly significant.

Males were more than twice as likely to be searched than females. Black males were 34 percent (.032+.308) more likely to be searched than White males; Hispanic males were 30 percent (.283+.017) more likely to be searched than White males.

Out-of-state Blacks were 37.5 percent (.032+.343) more likely to be searched than out-of-state Whites; and out-of-state Hispanics were 63.4 (.283+.351) percent more likely to be searched than out-of-state Whites.

Young motorists (under thirty) were about one-third more likely to be searched than drivers over thirty. Blacks under thirty were 21 percent (.179+.032) more likely to be searched than Whites under thirty; and Hispanics under thirty were 22.6 percent (.283-.057) more likely to be searched than Whites under thirty.



TABLE 4.8  
2002 CONTRABAND

	Coefficient	Odds Ratio	Discrete Change
Black	-.024 (-0.10)	.976	-.0056
Hispanic	-.920 (-5.07)**	.398	-.2024
Out of State	.133 (3.64)**	1.142	.0312
Out of State Hispanic	-.371 (-6.59)**	.690	-.0827
Out of State Black	.177 (2.55)**	1.193	.0419
Male	.057 (1.55)	1.058	.0131
Black Male	-.027 (-0.31)	.973	-.0064
Hispanic Male	.337 (4.55)**	1.400	.0800
Under 30	.317 (3.13)**	1.373	.0705
Black under 30	-.035 (-0.16)	.965	-.0082
Hispanic under 30	-.092 (-0.54)	.913	-.0212
Constant		-.634 (-6.04)**	
Observations		40,870	
Z scores in parentheses			
* significant at .05 level			
** significant at .01 level			

### *Interpretation:*

In 2002, for the discovery of contraband, racial coefficients for Blacks and Hispanics are negative, implying there is less likelihood of discovering contraband on them than Whites, given a search; albeit the Black coefficient alone is insignificant at the ten percent level, but highly significant for Hispanics. Odds of contraband being discovered on out-of-state motorists are only about 14 percent higher than for in-state residents. For out-of-state Blacks, odds of finding contraband, given a search, were about 15.3 percent (.177-.024) higher than for out-of-state

Whites. For out-of-state Hispanics, odds of finding contraband were lower more than twice ( $-.920+-.371=1.291$ ) than for out-of-state Whites. Males were about equally likely to be found with contraband as females. For Black males, contraband results were statistically insignificant. For Hispanic males, odds of finding contraband were about 58.3 percent ( $.337-.920$ ) lower than for White males. As for the age variable, odds of finding contraband on drivers under thirty were about 37 percent higher than for those over thirty, and interaction terms of under thirty Blacks and Hispanics were statistically insignificant at even the ten percent level.

## 2. 2003 Citations

Descriptive statistics for independent variables:

TABLE 4.9  
2003 CITATIONS DESCRIPTIVE STATISTICS

Variable	Mean	Standard Deviation
Black	.0941	.2919
Hispanic	.2483	.4320
Out of State	.1588	.3655
Out of State Black	.0176	.1315
Out of State Hispanic	.0484	.2146
Male	.7115	.4531
Black Male	.0653	.2471
Hispanic Male	.1878	.3903
Under 30	.4811	.4996
Black under 30	.0432	.2034
Hispanic under 30	.1295	.3357
Observations	1,094,401	
Minimum	0	
Maximum	1	

TABLE 4.10  
2003 CITATIONS SEARCH

	Coefficient	Odds Ratio	Discrete Change
Black	.0211	1.021	.0016
	(0.64)		
Hispanic	1.219	3.384	.1180
	(66.42)**		
Out of State	.175	1.192	.0136
	(13.27)**		
Out of State Hispanic	.322	1.380	.0267
	(17.85)**		
Out of State Black	.261	1.298	.0213
	(9.31)**		
Male	.681	1.976	.0448
	(55.25)**		
Black Male	.349	1.418	.0291
	(10.86)**		
Hispanic Male	-.314	.7302	-.0213
	(-17.31)**		
Under 30	.290	1.337	.0215
	(29.77)**		
Black under 30	.076	1.079	.0057
	(3.20)**		
Hispanic under 30	-.184	.8319	-.0128
	(-12.73)**		
Constant		-3.50	
		(-268.54)**	
Observations		1,094,401	
Z scores in parentheses			
* significant at .05 level			
** significant at .01 level			

*Interpretation:*

As in 2002, for the 2003 citation database, Blacks appeared to be marginally more likely to be searched than Whites, but the logit results were statistically insignificant at even the ten percent level for the Black variable alone. Hispanics were almost three and one-half times more likely than Whites to be searched, and the results were highly significant at the .01 level. The discrete change going from White to Hispanic increased the likelihood of being searched by almost 12 percentage points. Out-of-

state motorists were 19 percent more likely than Texas residents to be searched.

Out-of-state Blacks were 28 percent (.261+.021) more likely to be searched than out-of-state Whites. Out-of-state Hispanics were almost three times (.322+1.219=1.541) more likely to be searched than out-of-state Whites. Males were twice (1.976) as likely to be searched than females. Black males were 37 percent (.349+.021) more likely to be searched than White males; and Hispanic males were 90 percent (1.219-.314) more likely to be searched than White males.

Drivers under thirty were one-third more likely to be searched than those over thirty. Blacks under thirty were about 10 percent (.097) more likely to be searched than Whites under thirty. Hispanics under thirty were twice (1.035) as likely to be searched than Whites under thirty.

TABLE 4.11  
2003 CITATIONS CONTRABAND

	Coefficient	Odds Ratio	Discrete Change
Black	.106 (1.62)	1.111	.0203
Hispanic	-1.100 (-37.60)**	.136	-.3454
Out of State	.068 (2.61)**	1.070	.0129
Out of State Hispanic	-.227 (-5.47)**	.797	-.0408
Out of State Black	.101 (1.90)	1.106	.0195
Male	.068 (2.71)**	1.070	.0126
Black Male	.084 (1.31)	1.088	.0161
Hispanic Male	.778 (14.93)**	2.177	.1536
Under 30	.303 (15.53)**	1.354	.0566
Black under 30	-.181 (-3.95)**	.834	-.0326
Hispanic under 30	.076 (2.16)*	1.079	.0144
Constant		-.735 (-29.25)**	
Observations		98,726	
Z scores in parentheses			
* significant at .05 level			
** significant at .01 level			

*Interpretation:*

For searches, given a citation in 2003, Blacks appear to have been marginally more likely than Whites to have been found in possession of contraband, but the results were insignificant at the five percent level. Hispanics were much less likely to have been discovered with contraband than Whites, and the result was very highly significant. Out-of-state motorists were about equally as likely as Texas residents to have been discovered with contraband. Out-of-state Blacks were about 20 percent (.101+.106) more likely to possess contraband than out-of-state Whites;

and out-of-state Hispanics were twice less likely to possess contraband than out-of-state Whites.

### 3. 2003 Warnings

Descriptive statistics for independent variables:

TABLE 4.12  
2003 WARNINGS DESCRIPTIVE STATISTICS

Variable	Mean	Standard Deviation
Black	.0892	.2850
Hispanic	.2028	.4021
Out of State	.1587	.3654
Out of State Black	.0188	.1360
Out of State Hispanic	.0300	.1706
Male	.6923	.4616
Black Male	.0619	.2410
Hispanic Male	.1536	.3606
Observations	1,066,493	
Minimum	0	
Maximum	1	

TABLE 4.13  
2003 WARNINGS SEARCH

	Coefficient	Odds Ratio	Discrete Change
Black	.992	2.700	.0144
	(14.03)**		
Hispanic	1.306	3.692	.0191
	(24.46)**		
Out of State	1.132	3.100	.0162
	(41.65)**		
Out of State Hispanic	-.145	.865	.0013
	(-3.72)**		
Out of State Black	-.134	.874	.0012
	-2.62)**		
Male	.958	2.607	.0078
	25.79)**		
Black Male	.077	1.080	.0007
	(1.03)		
Hispanic Male	-.002	.998	-.0000
	(-0.04)		
Constant		-5.84	
Observations		1,066,493	
Z scores in parentheses			
* significant at .05 level			
** significant at .01 level			

### *Interpretation:*

The age variable is absent from the warnings data because no dates of birth were recorded. Blacks were almost three times as likely as Whites to be searched, Hispanics almost four times. Being Black meant a discrete increase in the odds of being searched by 1.4 percentage points; and being Hispanic meant a discrete increase by 1.9 percentage points. Males were two and a half times as likely to be searched than females. Black males were twice as likely (.077+.992=1.069) to be searched than White males. Hispanic males were more than twice as likely (1.306-.002=1.304) to be searched than White males.

Out-of-state motorists were three times as likely as in-state residents to be searched. Out-of-state Blacks were almost 86 percent (.992-.134) more likely to be searched than out-of-state Whites. Out-of-state Hispanics were more than twice as likely (1.161) to be searched than out-of-state Whites.

TABLE 4.14  
2003 WARNINGS CONTRABAND

	Coefficient	Odds Ratio	Discrete Change
Black	.099	1.105	.0066
	(0.49)		
Hispanic	-1.075	.341	-.0668
	(-5.23)**		
Out of State	-.262	.769	-.0164
	(-2.87)**		
Out of State Hispanic	.345	1.412	.0248
	(2.08)*		
Out of State Black	.263	1.301	.0187
	(1.69)		
Male	-.339	.713	-.0244
	(-3.05)**		
Black Male	.104	1.110	.0069
	(0.50)		
Hispanic Male	-.076	.927	-.0049
	(-0.35)		
Constant		-1.788	
		(-17.27)**	
Observations		14,576	
Z scores in parentheses			
* significant at .05 level			
** significant at .01 level			

*Interpretation:*

Blacks are about as equally as likely as Whites to be found possessing contraband, but the results are insignificant at the five percent level. Hispanics are less likely, about 65 percent less likely, than Whites to be found possessing contraband. Out-of-state motorists are about 20 percent less likely than Texas residents to be found in possession; out-of-state Blacks are about 36 percent (.099+.263) more likely than out-of-state Whites to be found with contraband, but both the Black and out-of-state Black coefficients are insignificant. Out-of-state Hispanics are almost 75 percent (.345-1.075) percent less likely than out-of-state Whites to be in possession, and both the Hispanic and out-of-state Hispanic coefficients are significant. Males are less likely than females to have been found in possession. Coefficients for Blacks, Black males and Hispanic males were insignificant at even the 10 percent level.



### B. *Summary Interpretation for All Logit Results:*

The logit results confirm what the earlier cross tabulations and difference of binomial proportions tests reflect. Blacks, particularly Black males, are searched at higher rates than White males, but they exhibit only marginally higher, in some cases essentially the same, hit rates than Whites, when racial coefficients are significant. Hispanics across the board are searched at much higher rates, but exhibit much lower hit rates, than Whites.

## IX. SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

"The Court expects that 25 years from now, the use of racial preferences will no longer be necessary to further the interest approved today."<sup>532</sup>

Search and hit rates for African-Americans and Hispanics compared to Whites are shown here in scorecard fashion by the following tables.

TABLE 5.1  
SUMMARY OF RESULTS

TEST & DATA			
Cross Tabulation	%	≤ WHITE	> WHITE
2002			
Search			
Black	9.87		XX
Hispanic	9.26		XX
Contraband			
Black	41.89		XX
Hispanic	23.9	XX	
2003			
Search			
Black	6.07		XX
Hispanic	10.07		XX
Contraband			
Black	35.3		XX
Hispanic	12.54	XX	

532. See *Grutter v. Bollinger*, 539 U.S. 306, 322-23 (2003).

TABLE 5.2  
SUMMARY OF RESULTS

TEST & DATA			
Difference of Proportions	Z Score	≤ WHITE	> WHITE
2002			
Search			
Black	42.09***		
Hispanic	50.03***		XX
Contraband			
Black	3.16*	XX	
Hispanic	-40.97***		XX
2003 Citations			
Search			
Black	35.51***		XX
Hispanic	143.18***		XX
Contraband			
Black	5.13*	XX	
Hispanic	-80.79***		XX
2003 Warnings			
Search			
Black	47.10***		XX
Hispanic	76.56***		XX
Contraband			
Black	3.60*	XX	
Hispanic	-13.77***		XX

\* Insignificant

\*\* Significant at .05

\*\*\* Significant at .01

TABLE 5.3  
SUMMARY OF RESULTS

TEST & DATA			
Logit	Coefficient	≤ WHITE	> WHITE
2002			
Search			
Black	.032*		XX
Hispanic	.238***		XX
Contraband			
Black	-.024*	XX	
Hispanic	-.920***	XX	
2003 Citations			
Search	.021*		XX
Black	1.22***		XX
Hispanic			
Contraband			
Black	.106*		XX
Hispanic	-1.1***	XX	
2003 Warnings			
Search			
Black	.992***		XX
Hispanic	1.31***		XX
Contraband			
Black	.01*		XX
Hispanic	-1.08***	XX	

\* Insignificant

\*\* Significant at .05

\*\*\* Significant at .01

To summarize, there is no statistically significant evidence of disproportion in stops among Whites, Blacks, and Hispanics, with the reservation of possible downward bias due to the Highway Patrol Division's presence primarily on rural roads. When racial coefficients are statistically significant, Blacks are searched at higher rates than Whites; although they exhibit essentially equivalent hit rates to Whites. At a minimum, this is evidence of what Knowles, Persico and Todd would call statistical profiling.<sup>533</sup> Hispanics are searched at much higher rates than Whites, but exhibit much lower hit rates. From these results, it can be inferred that while Blacks may suffer statistical profiling, a definite pattern of racial profiling is evident against Hispanics; in that they are, and are much more

533. Knowles, Persico & Todd, *supra* note 109, at 205.

likely to be searched than Whites, but are less likely to possess and actually less often do possess contraband than Whites. In the words of Hernández and Knowles, this could be indicative of "taste-based" discrimination against them.<sup>534</sup>

As these results indicate, data collection on stops and searches by race is an "essential" first step in the right direction.<sup>535</sup> Nevertheless, room is left for improvement. Under current Fourteenth Amendment doctrine, proof of animus is required; but if animus is not present (at least in a conscious state), a judicial remedy may be beyond the pale of adequately addressing the problem at the institutional level.<sup>536</sup> That may more properly lie in cultural and political venues.

Although Texas has made significant progress, its present state of data collection would be vastly improved by expansion and greater specificity. The first area for improvement is in recording probable cause for search. As it is, the data simply reflect probable cause for search in a global sense. Thus, probable cause is treated as an independent variable by itself as an explanation leading to a decision to search (the dependent variable). But what constitutes probable cause is not really an unobservable variable necessarily relegated to the error term in an econometric equation. Probable cause is not an independent variable at all; it is a dependent variable contingent upon independent variables such as (1) objects in plain view, (2) heavily tinted windows, (3) suspicious odors, (4) blood-shot eyes, (5) slurred speech, and an array of others that are subject to dichotomous quantification, in lieu of lumping them together under the general rubric of probable cause.<sup>537</sup> A trooper could record the type of probable cause he or she had to search, which would move the present unobservable variables, or at least some of them, from the error term into the explanatory variable matrix, allowing researchers to control them. After all, in a court of law a trooper cannot justify a search simply by testifying he or she had probable cause.<sup>538</sup> Explication of the exact type

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534. Hernández-Murillo & Knowles, *supra* note 126, at 965.

535. Gross & Barnes, *supra* note 326, at 656.

536. Keenan v. City of Philadelphia, 983 F.2d 459, 466 (3rd Cir. 1992) (citing Andrews v. Philadelphia, 895 F.2d 1469, 1478 (3rd Cir. 1990)).

537. These variables are generally accepted by courts as "factors" an officer may take into consideration when finding probable cause to search. See *United States v. White*, 2006 U.S. App. LEXIS 721, at \*2-3 (6th Cir. 2006); *United States v. MacKey*, 149 Fed. Appx. 874, 878 (11th Cir. 2005); *United States v. West*, 219 F.3d 1171, 1174 (10th Cir. 2000); *United States v. Rhodes*, 1994 U.S. App. LEXIS 18701, at \*2 (10th Cir. 1994); *Pecsenye v. Village of Park Forrest*, 1997 U.S. Dist. LEXIS 2546, at \*10 (N.D. Ill. 1997).

538. The ulterior motives of officers are not usually relevant in assessing the reasonableness of a search. Reasonableness is determined by an "ordinary" Fourth Amendment analysis. This involves "an objective assessment of an officer's actions in light of the facts

or nature of cause is required.<sup>539</sup> Lucidity of this variable would be introduced into the data if probable cause were transformed into a dependent variable explained by the host of independent variables troopers already needed to justify a search warrant, or in-court testimony. This additional burden on law enforcement therefore does not seem to be onerous. For the researcher, this additional specificity would be valuable in pondering suspected existence of pretext, a danger always lurking beneath discrimination defenses. It is recommended that any revision to the racial profiling statutes mandate greater specificity of probable cause.

A second recommendation is that consent to search be written. This issue has generated skepticism among civil liberties advocates that in certain circumstances consent had actually been given, thereby casting doubt upon testimony of a trooper that consent was voluntary.<sup>540</sup> Some advocacy coalitions have gone so far as to propose abolition of consensual searches.<sup>541</sup> Without going to that extreme, it does seem the data pertaining to consent would be less refutable if consent were written; as an adjunct to that, voluntariness of consent would be less dubious.<sup>542</sup>

A serious lacuna in the way data are collected in Texas lies in the uniformity of the data collection process itself.<sup>543</sup> This is particularly troublesome; and like consensual searches, has generated policy debate.<sup>544</sup> This issue, however, pales all the rest. A major deficiency with racial data collection in Texas is that the mandates of Texas Code of Criminal Procedure are so abstruse that too much discretion remains with local law enforcement agencies as to how, or even whether, they collect the data.<sup>545</sup> As Lundman and Kaufman<sup>546</sup> pointed out, in most, if not all, jurisdictions, law enforcement is the only data collector, leaving itself subject to the criticism of Sir Josiah Stamp that the data collector puts down what

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and circumstances then known to him." *See* *Scott v. United States*, 436 U.S. 128, 137 (1978).

539. It seems logical that if an officer must demonstrate "the facts and circumstances then known to him" for an "objective assessment" then the exact nature of those facts and circumstances must be presented. Otherwise how could a court reach a decision as to reasonableness? *See* *Scott*, 436 U.S. at 137.

540. *See, e.g.*, TOTMAN & STEWARD, *supra* note 21, at 10.

541. *Id.*

542. The City of Austin's Police Department has implemented such a policy, and the result has been a sixty-three percent decline in the number of consent searches. *See id.*

543. For an overview of the differences in data collection and reporting among Texas law enforcement agencies see, STEWARD RESEARCH GROUP, RACIAL PROFILING: TEXAS TRAFFIC STOPS & SEARCHES 4 (2004), available at <http://www.txlulac.org/Downloads/racialprofilingreport.pdf>.

544. *Id.* at 6-8.

545. *Id.* at 4 (2004); *see also* TEX. CODE CRIM. PROC. ANN. art. 2.132(b)(6) (Vernon 2005); TEX CODE CRIM. PROC. ANN. art. 2.133 (Vernon 2005).

546. Lundman & Kaufman, *supra* note 102, at 199.

he "damn pleases."<sup>547</sup> So long as this statutory deficiency exists, statistics on racial profiling will always be vulnerable to rejoinders from law enforcement, as evident earlier, that the data are inconclusive.<sup>548</sup>

At minimum, this is an appearance of a conflict of interest, if not a real one, for law enforcement. Because law enforcement officers self-report, there is always the temptation to be less than accurate, lest they implicate themselves.<sup>549</sup> Even given the good reputation for truth and veracity of most law enforcement officials, there still exists at least the appearance of a conflict of interest, which should be avoided if law enforcement is to maintain confidence in the court of public opinion; which it must.<sup>550</sup> Local law enforcement agencies which wield this magnitude of discretion include not just local self-rule municipalities, but also unincorporated jurisdictions usually served by county sheriffs and constables, not to mention scads of autonomous jurisdictions, such as regional transit authorities, school police, and airport authorities.<sup>551</sup> All are the sole data collectors charged with this vital enforcement function of the racial profiling statutes.<sup>552</sup> At the present, however, compliance ranges all the way from good faith efforts on par with the Texas Department of Public Safety to outright refusal to collect data at all, because in the judgment of some local officials it is not required.<sup>553</sup> It is, therefore, recommended that existing racial profiling statutes be amended to divest some, if not all, discretion of law enforcement agencies from the mandate of collecting racial data, and how it is recorded.

The videotaping exemption from the requirement of quantitative data collection, article 2.135, Texas Code of Criminal Procedure, must be clarified or repealed so as to require either quantitative data recording, or both quantitative recording and videotaping. This exemption is little different from the overly broad discretion vested in the exclusive data collectors, because it opens a wide loophole. First, videotaping alone is an inferior substitute for quantitative data collection, in that it is of little use to researchers in any statistical analysis. To be useful, video data must be in quantifiable form, or at least able to be put in that form, a potentially dubious, and definitely time-consuming and expensive process. Second, the videotaping exemption allows agencies to opt out of the data collec-

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547. *Id.*; see also STAMP, *supra* note 493, at 258-59.

548. Lundman and Kaufman report that as of 2003, several police departments had already been caught falsifying data. See Lundman & Kaufman, *supra* note 102, at 199.

549. *Id.*

550. Carrick stresses this heavily. See Carrick, *supra* note 180, at 10.

551. All of these entities are "law enforcement agencies" subject to the Texas Racial Profiling Act. See TEX. CRIM. PROC. ANN. art. 2.132(a)(1) (Vernon 2005).

552. TEX. CODE CRIM. PROC. ANN. art. 2.132(b)(6) (Vernon 2005).

553. See COPS REPORT, *supra* note 42, at 100.

tion process altogether, both at the individual officer and the agency level, if video equipment is deployed.<sup>554</sup> This essentially negates the statutory data collection mandate, thereby nullifying its entire public policy of banning racial profiling. If the exclusive data collectors are exempt from data collection, no one is left to perform this vital task. Finally, even if eventually able to be quantified, videotaped data is of dubious value, in that it is subject to bias injected via human interpretation at the input stage. Individual officers present on the scene are eminently better qualified to make decisions about race or skin color of a detainee than are third party technicians viewing grainy, blurry, or inaudible films in an *ex post facto* setting. The opportunity for bias, intentional or unintentional, is simply too great to be acceptable in a serious public policy context. The DPS is to be commended for its internal regulation requiring both videotaped and recorded quantifiable data, a standard that ideally should be requisite for all Texas law enforcement agencies.<sup>555</sup> It is, therefore, my wholehearted recommendation that the Texas Legislature abolish the videotaped data collection exemption from the racial profiling statutes.

Finally, the more nettlesome cultural issues of law enforcement recruitment and training need to be addressed.<sup>556</sup> Although a legislative response to how law enforcement agencies recruit and train their troops is possible, it should be unnecessary. Some agencies like DPS have demonstrated they are capable of resolving these issues by themselves; while, other agencies appear not to be so receptive.<sup>557</sup> Recruitment and training are legally evasive because implementation is broader than mere legislative mandate can address. They are cultural needs requiring cultural solutions. Training officers to spot criminals by race, whether overtly such as by official proclamation or by invidious implication such as in visual aids, creates the sort of self-fulfilling prophecy that is best addressed within the prevailing law enforcement community itself. Increased recruitment of minority races into the ranks of the law enforcement community would do more to foster trust in the law than all the racial profiling statutes combined.

The ultimate question is, what implications do these findings hold for the Texas Department of Public Safety? Are disparities race aware or race benign? The data and analyses reflect that while there are racial

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554. TEX. CODE CRIM. PROC. ANN. art. 2.135(a) (Vernon 2005).

555. See TEX. DEP'T OF PUB. SAFETY, *supra* note 253, at 4-6.

556. Indeed, a report compiled for the U.S. Department of Justice stated that better recruitment and training policies are essential for the prevention of racial profiling. See COPS REPORT, *supra* note 42, app. at 136-37.

557. TEX. DEP'T OF PUB. SAFETY, *supra* note 253, at 4-7; see also STEWARD RESEARCH GROUP, RACIAL PROFILING: TEXAS TRAFFIC STOPS & SEARCHES 4 (2004), available at <http://www.txlulac.org/Downloads/racialprofilingreport.pdf>.

disparities in searches by DPS and hit rates by race, the data are insufficient to reach an irrefutable conclusion of racial profiling. What can be concluded is that racial disparities on Texas highways do exist. For the present, reforms urged include more specific data collection, augmented minority recruitment into law enforcement, less biased training by eliminating racial stereotypes, written consent to search, elimination of statutory ambiguities, repeal of the videotaping exemption, and constant vigilance whenever the apparition of racial profiling rears its undead head.